

Foot and Mouth Disease

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The recent outbreaks of foot and mouth disease in Great Britain, France, and Argentina have generated a great deal of concern in the livestock industry. The disease, what is being done nationally, and what we can do locally were the subject of a recent meeting held in Cheyenne. Attendees included Dr. Jim Logan, the State Veterinarian; Dr. Frank Galey from the Wyoming State Veterinary Laboratory, College of Agriculture, University of Wyoming; Ron Micheli from the Wyoming Department of Agriculture, Dr. Tom Thorne and Reg Rothewell from the Wyoming Game and Fish Department, and Dr. Bret Combs (USDA-APHIS Area Veterinarian in Charge) and John Larsen (USDA-APHIS Plant Protection & Quarantine) from the Cheyenne office of the United States Department of Agriculture (USDA).

Foot and mouth disease (FMD) is a highly contagious viral disease of cattle, swine, and other cloven-hoofed animals such as sheep, goats, and deer. There are 7 types of the virus with many additional subtypes. Therefore, like influenza, resistance to one type does not completely protect against other types. The disease is not considered to be a threat to humans although humans can harbor the disease and occasionally develop mild symptoms. In susceptible animals, FMD causes blister-like lesions in the mouth, tongue, teats, and between the hooves. These blisters turn into erosions and ulcers. Early signs of disease may include fever and listlessness followed by drooling due to the mouth lesions. Some animals become lame from lesions in the hooves. Many affected animals recover. However, severe production losses may be incurred due to reductions in weight gain and milk production. In addition, the highly contagious nature of the disease means that almost all exposed animals are likely to become infected.

The concern about FMD results from its potential to spread rapidly and widely, the likelihood for production losses, and the economic effects from market restrictions and embargoes if the disease appears. FMD is highly contagious. It also is resistant to degradation in many natural environments and can survive on contaminated footwear and equipment, in carrier animals, in contaminated facilities and feed, in water, on contaminated vehicles, in raw or incompletely cooked animal products and garbage, and even imported semen. In addition, any animal including apparently recovered FMD victims, may become carriers of the disease. The carrier status of some species is unknown. Cattle may carry the disease for months and for African Buffalo it may be years.

Currently, North America is free of FMD. The United States has been free of FMD since 1929. The disease is present in the animal populations in Africa, and parts of Asia and South America. Because the disease occurs in so many parts of the world, introduction of the disease to free areas such as the US is always possible. Constant vigilance is necessary to help protect the US livestock and related industries from exotic diseases such as FMD. The recent outbreaks in Great Britain, France and Argentina are of special concern because of the large amount of trade and travel between the United States and those regions.

The USDA has taken a number of steps in response to the current, heightened threat from FMD. All ruminants and swine, and many animal products from affected regions have been prohibited from entering the United States. In addition, special information is being presented to airline passengers traveling from outbreak areas. The necessity for travelers to fully fill out customs declarations regarding visitation of farms and the ban on bringing agricultural products into the US are being emphasized and fines are being enforced. All luggage of travelers from affected areas is being inspected. Travelers who have been in contact with a farm within 5 days of travel are required to report that activity upon entry into the United States and will subsequently be told to walk through

disinfectant footbaths at that time. The USDA also is on heightened alert to respond to a possible outbreak in this country. Our livestock and wildlife are highly susceptible to the FMD viruses, and if an outbreak occurs, rapid spread is very possible. In event of an outbreak, early detection, quarantine, and eradication must be carried out immediately to avoid the potential billion-dollar impact on the industry. In addition, it is especially important to minimize the possibility of spread to wildlife that could then disseminate FMD regionally.

Control of an outbreak of FMD relies on immediate identification and containment. Containment includes slaughter of any animals that may have been exposed to the disease. Quarantine of affected regions is also done to keep animals and humans from spreading the disease. Carcasses and other infectious material must be incinerated or otherwise properly destroyed to eliminate infectious material. Vaccination is NOT an option for prevention. Due to the multiple subtypes of FMD virus, a vaccine that would cover all the subtypes is not available. More importantly, vaccinated animals can not be exported or marketed because the vaccination mimics exposure to the disease and could mask a carrier. So, preventative vaccination itself would actually harm the industry's market. Authorities indicate that vaccination for a specific subtype of FMD is only used as a tool to help control an outbreak and then only under some situations.

Locally we can contribute. Panic is not warranted. FMD is not a new disease and has been a constant threat for many years. The safeguards in place have served the United States well to date. It is important, however, that we become informed, remain vigilant, and use common sense. Steps we can, and should always take involve the practice of good animal husbandry. First and foremost, be on the alert for slobbering, lameness, or other signs of FMD in your herd. If you see such evidence, immediately contact your veterinarian, the State Veterinarian, or Federal animal disease authorities. They will test for the disease and provide advice on how to proceed. In addition, the process will be set in motion to contain the outbreak should FMD appear. There are many other diseases, such as BVD, vesicular stomatitis, bluetongue, foot rot, and even mouth injuries from coarse hay that may mimic FMD. Thus, a rapid diagnosis of one of these other diseases is also important.

In addition to watching for FMD in your herd, other common sense precautions are also suggested. Those who visit multiple farms and ranches, such as veterinarians and neighboring ranchers, should remember the biosecurity precautions taught in agricultural and veterinary schools. Disinfect boots between different ranches. Clean any instruments or equipment used in contact with animals. Be sure that you don't become a vector for any disease.

If you are receiving visitors from affected areas such as Great Britain, France, Argentina or any of the endemic areas, insist that they not visit a farm within 5 days of leaving their country. You may even want to be sure they washed their clothes before packing. Consider asking foreign visitors to step through a disinfectant bath before coming onto your ranch or farm. If you are a visitor to an affected region, take the same precautions yourself.

Do not accept any animals or animal products that may have originated from an affected region. Be very careful of imported dogs or visitors who bring dogs. Although dogs are not severely affected by FMD, they are potential carriers. Insist that any dog that comes into the US from a FMD region has not been on a farm for 5 days before it leaves, has been thoroughly bathed, and is shipped in a clean crate. Once the dog arrives, bathe it again, and keep off site and away from any livestock environment for at least 5 days before it is allowed contact with livestock.

In the final analysis, the best defense against a foreign disease such as FMD is knowledge and common sense. Signs of the disease include lameness, slobbering, and weight loss. If you have questions about FMD or observe suspicious signs in any of your animals, contact your local veterinarian, and State or Federal authorities immediately. Contact your local game warden about sick or ill wildlife. If the game official suspects FMD, they should immediately contact either Dr. Logan or Dr. Combs. Be alert for travelers (both animal and human) and animal products coming into contact with your animals.

In summary, we do not expect to have FMD in Wyoming, but we also don't want to be complacent and be faced with a problem.

Additional, up to date information about the recent outbreaks in Europe and Argentina, along with detailed information about FMD, proper procedures, and appropriate disinfectants and other preventative measures can be found at the USDA WEB site, which is <http://www.aphis.usda.gov>. You can also access the APHIS site via the Wyoming State Veterinary Laboratory site at <http://wyovet.uwyo.edu/> under "Other Useful Sites". In addition, you may also contact the Wyoming State Veterinary Laboratory at (307) 742-6638, the State Veterinarian (Dr. Jim Logan) at (307) 777-7515, or the Wyoming Department of Agriculture (Ron Micheli's office) at (307) 777-7321.