Foot-and-Mouth Disease

What an FMD Outbreak Could Mean in California

Farmers in the United States are concerned about the ongoing news of foot-and-mouth disease (FMD) in the United Kingdom and elsewhere, and the United States Department of Agriculture has ample reason to maintain a high level of vigilance to prevent the introduction of FMD to the United States.

FMD is a highly contagious viral disease of cloven-hoofed animals, including cattle, swine, sheep and goats, and also wild and captive deer, elk, wild boar and camelids. The disease is characterized by suddenly appearing vesicles or blisters on the mouth, nose, feet and teats. The blisters quickly rupture to leave eroded areas or ulcers. Control is maintained through exclusion of animals from FMD-endemic areas and stamping out any occurrences of the virus. As of May 11, the current outbreak in the UK had resulted in nearly 2.7 million pigs, sheep and cattle being destroyed or identified for slaughter on at least 7,180 premises.

An outbreak of FMD would be an agricultural disaster for California’s important beef, dairy and swine industries. Smaller goat and sheep operations would also be devastated if animals were exposed to the disease—even zoo animals could be affected. It could cost from $6–14 billion to control an outbreak, according to a 1998 UC Davis study that estimated some economic impacts, assuming an outbreak could be successfully controlled. Rebuilding herds and restoring international trade would take several years.

The Role of UC Davis

The School of Veterinary Medicine is working with state and federal agricultural agencies to be able to quickly recognize and report the disease, and cooperate in an emergency. The USDA has ultimate responsibility for diagnosis, research and control, but the school stands ready to help in several ways:

- The California Animal Health and Food Safety (CAHFS) Laboratory System, based at the school, works directly with the California Department of Food and Agriculture (CDFA) on statewide surveillance and diagnosis of animal diseases, which would facilitate rapid response and efficient communication if an animal disease emergency were to occur in California.

- Eleven faculty members have undergone training at the USDA’s Plum Island Animal Disease Center and have been providing much-needed information to producers and the public since the outbreak in the UK began.

The virus that causes FMD (seven main FMD virus types exist, with at least 60 subtypes) is present in the blood, urine, feces, saliva, bone and muscle tissues of infected animals. The virus spreads extremely rapidly and effectively through the air (it is aerosolized by coughing) and by contact (FMD can be spread by contaminated shoes and clothing).