Memorandum

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

Division of Water Program Coordination — 9th Floor, 629 East Main Street, Richmond, VA

SUBJECT: Guidance Memorandum No. 01-2017
DEQ Staff Biosecurity Procedures and Response to Suspected and/or Confirmed Outbreak of Foot and Mouth Disease (FMD).

TO: Regional Directors

FROM: Larry G. Lawson, P.E.

DATE: May 21, 2001

COPIES: Regional Permit Managers, Regional Compliance and Enforcement Managers, Regional Water Permit Managers, OWPP Staff, and Don Wampler

One of the tasks assigned to DEQ under the draft Emergency Action Plan for Foot and Mouth Disease (FMD) is to develop, maintain, and implement plans and procedures to prevent, mitigate, and effectively manage and recover from adverse environmental impacts resulting from an animal disease outbreak. This memorandum addresses biosecurity measures that DEQ staff will implement while conducting all future inspections or visits to farming operations, and also how inspection and site visit schedules will be impacted by a suspected or confirmed FMD outbreak. These procedures will remain in effect even after it is determined that FMD is no longer a threat to the Commonwealth of Virginia, due to the fact that the FMD virus is not the only disease causing organism encountered on livestock operations. As employees of the Commonwealth, we have a responsibility to protect not only the environment, but also the health of its animal population and the livelihood of Virginia's agricultural producers.

Description of Foot and Mouth Disease

FMD is an acute, highly contagious viral infection of all cloven-hoofed animals. There is no known cure and treatment does not prevent the spread of the infection. Transmission pathways of FMD are by aerosol; direct contact between infected and susceptible animals; indirect contact with animal products such as milk, semen, hides, meat; and viral contamination of objects in the environment precipitating mechanical transfer of the disease. Although infection in humans is extremely rare, humans are capable of carrying the virus on their body and clothing and passively transmitting it to susceptible animals.

Staff is encouraged to visit the following websites to educate themselves about FMD and proper procedures for preventing spread of the virus:

http://www.vdacs.state.va.us/animals/fmd.html
http://www.aphis.usda.gov/oa/fmd/index.html
http://aleffgroup.com/avisfmd/index.html
http://www.maff.gov.uk/animalh/diseases/fmd/default.htm

After returning from any foreign country, employees should contact the Division of Animal Industry Services, State Veterinarian's Office for specific guidance, before resuming farm visits.

I. Biosecurity Procedures

Due to the fact that humans can transport not only the FMD virus, but many other viruses that affect livestock, we must take minimum biosecurity measures to reduce the risk of DEQ employees acting as carriers from one livestock operation to another. These measures are consistent with biosecurity practices established by the Commissioner of Agriculture and Consumer Services for VDACS employees. Effective immediately, all staff visiting any farm will take the following steps to minimize risks of disease transfer.

1. Wear clean clothing or coveralls. Change and clean clothing or coveralls as needed after contact with animals or animal waste, especially before entering another farm.

2. Wear footwear suitable for scrubbing. Good quality, calf high rubber boots will make cleaning easier. Footwear will be scrubbed thoroughly with a brush and sanitizing solution before entering a farm and also before leaving, or alternatively, plastic disposable boots should be worn and left at the farm. It is recommended that inspectors carry a plastic garden-type sprayer filled with disinfectant and a long handled scrub brush to facilitate disinfection.

3. Vehicles should be kept clean inside and outside. This may be accomplished by avoiding possible areas of contamination on the farm. It is easier and more efficient to disinfect footwear than vehicles. Tires of vehicles should be sprayed with disinfectant and scrubbed in the same manner as footwear.

4. Contact with farm operators or managers must be attempted prior to visiting any farming operation. Biosecurity should be discussed with farm operators. If farms have more stringent biosecurity measures in place, staff will perform such measures as instructed.

These measures are to be used when we visit farming operations with livestock that are susceptible to the FMD virus. This applies to beef, dairy, and swine operations as well as to operations that are primarily poultry, but may have some beef dairy, or swine present. Guidance Memo No. 00-2018 – "Implementation of the VPA General Permit Regulation for Poultry Waste Management" has an attached biosecurity strategy that will be followed for all other poultry operations.

A number of possible approved disinfectants are still under review by EPA. It is anticipated that sometime after May 19th, 2001 a list of approved disinfectants will be issued by EPA and USDA. The only disinfectant currently approved for use by USDA and EPA against FMD is Virkon-S®. In the meantime, we should use one of the three suggested disinfectants listed below. Please note that proper cleaning and scrubbing is essential to the effectiveness of disinfectants.

- 1 part household vinegar to 1 part water (gives a 2% solution acetic acid)
- 1 ounce (two tablespoons) household bleach (sodium hypochlorite) to 1 gallon of water for clean surfaces only
- 1.3 ounces Virkon-S® (broad spectrum) disinfectant to 1 gallon of water

II. Response to Suspected or Confirmed FMD Outbreak

The Commonwealth is currently developing an Emergency Action Plan for Foot and Mouth Disease. Highlights of the draft document appear as bulleted items below.

- The Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Game and Inland Fisheries (VDGIF) will be the primary agencies in investigating, containing, and eradicating an FMD outbreak.

- In the event of a suspected FMD outbreak, prompt notification is critical to a rapid response. Notification of a suspected outbreak must be made to the Virginia State Veterinarian, the Virginia Emergency Operations Center (EOC), the VDGIF, and the Federal Area Veterinarian-In-Charge. If the initial notification is received by any agency other than the Virginia Department of Emergency Management (DEM), it is imperative that the agency notified contact the Virginia EOC.

- Once the Virginia EOC is notified of a suspected FMD outbreak, normal standard operating procedures will allow for the appropriate notifications to be made to the primary and support state and federal agencies. Laboratory tests must be conducted to confirm FMD, at the USDA Plum Island Animal Disease Center, located in New York.

As soon as DEQ is made aware of a suspected outbreak in the Commonwealth or surrounding states, all inspections and site visits to farms will cease until the suspected outbreak is confirmed not to be FMD. It is anticipated that this will be accomplished within 24 hours after the lab receives the sample; however, sampling and transport time may add a few days to this process. If the suspected outbreak is ruled not to be FMD, then inspections will continue with staff following the biosecurity procedures outlined above.

- The Virginia DEM will request a state Declaration of Emergency from the Governor once it is determined that a confirmed foot-and-mouth disease exists to susceptible domestic and wildlife animals in the Commonwealth, based on a recommendation from the Commissioner of Agriculture and Consumer Services and the State Veterinarian.

- The USDA will support state initiatives to identify, seize, quarantine, eradicate, and dispose of animals and associated contaminated materials. The federal declaration may be issued prior to the state's declaration if an outbreak occurs in another state or concurrent with the state emergency declaration if an FMD outbreak occurs first in the Commonwealth.

Once a confirmed outbreak exists that may impact the Commonwealth, DEQ will cease all farm inspections and visits until such time as the State Veterinarian, in coordination with the USDA Area Veterinarian-In-Charge, determines it safe to resume normal operations.

A fact sheet on FMD is attached to this guidance. This may be distributed to farm operators during inspections or site visits by DEQ staff. Please ensure that all of your employees who may make farm visits receive these materials, and also implement the biosecurity procedures outlined in this document.

If there are any questions about this guidance, please contact Scott Haley at 804/698-4443.

/tsh

Attachment

DISCLAIMER

This document provides procedural guidance to the permit staff. This document is guidance only. It does not establish or affect legal rights or obligations. It does not establish a binding norm and is not finally determinative of the issues addressed. Agency decisions in any particular case will be made by applying the State Water Control Law and the implementation regulations on the basis of the site specific facts when permits are issued.

FACT SHEET
Veterinary Services
APHIS
United States Department of Agriculture
Animal and Plant Health Inspection
March 2001

Foot-and-Mouth Disease

Foot-and-mouth disease (FMD) is a severe, highly communicable viral disease of cattle and swine. It also affects sheep, goats, deer, and other cloven-hooved ruminants. FMD is not recognized as a zoonotic disease.

This country has been free of FMD since 1929, when the last of nine U.S. outbreaks was eradicated.

The disease is characterized by fever and blister-like lesions followed by erosions on the tongue and lips, in the mouth, on the teats, and between the hooves. Many affected animals recover, but the disease leaves them debilitated. It causes severe losses in the production of meat and milk.

Because it spreads widely and rapidly and because it has grave economic as well as clinical consequences, FMD is one of the animal diseases that livestock owners dread most.

What Causes It

The disease is caused by a virus. The virus survives in lymph nodes and bone marrow at neutral pH, but destroyed in muscle when in pH<6.0 i.e. after rigor mortis. The virus can persist in contaminated fodder and the environment for up to one month, depending on the temperature and pH conditions.

There are at least seven separate types and many subtypes of the FMD virus. Immunity to one type does not protect an animal against other types.

How It Spreads

FMD viruses can be spread by animals, people, or materials that bring the virus into physical contact with susceptible animals. An outbreak can occur when:

- People wearing contaminated clothes or footwear or using contaminated equipment pass the virus to susceptible animals.
- Animals carrying the virus are introduced into susceptible herds.
- Contaminated facilities are used to hold susceptible animals.
- Contaminated vehicles are used to move susceptible animals.
- Raw or improperly cooked garbage containing infected meat or animal products is fed to susceptible animals.
- Susceptible animals are exposed to materials such as hay, feedstuffs, hides, or biologics contaminated with the virus.
- Susceptible animals drink common source contaminated water.
- A susceptible cow is inseminated by semen from an infected bull.

Signs

Vesicles (blisters) followed by erosions in the mouth or on the feet and the resulting slobbering or lameness are the best known signs of the disease. Often blisters may not be observed because they easily rupture, leading to erosions.

Some of these other signs may appear in affected animals during an FMD outbreak:

- Temperatures rise markedly, then usually fall in about 2 to 3 days.
- Ruptured vesicles discharge either clear or cloudy fluid and leave raw, eroded areas surrounded by ragged fragments of loose tissue.
- Sticky, foamy, stringy saliva is produced.
- Consumption of feed is reduced because of painful tongue and mouth lesions.
- Lameness with reluctance to move is often observed.
- Abortions often occur.
- Milk flow of infected cows drops abruptly.
- Conception rates may be low.
- FMD can lead to myocarditis (inflammation of the muscular walls of the heart) and death, especially in newborn animals.

Animals do not normally regain lost weight for many months. Recovered cows seldom produce milk at their former rates.

Confusion With Other Diseases

FMD can be confused with several similar, but less harmful, diseases, such as vesicular stomatitis, bluetongue, bovine viral diarrhea, and foot rot in

cattle, vesicular exanthema of swine, and swine vesicular disease. Whenever mouth or feet blisters or other typical signs are observed and reported, laboratory tests must be completed to determine whether the disease causing them is FMD.

Where FMD Occurs

While the disease is widespread around the world, North America, Central America, Australia, New Zealand, Chile, and some countries in Europe are considered free of FMD. Various types of FMD virus have been identified in Africa, South America, Asia, and part of Europe.

Prevention and Control

FMD is one of the most difficult animal infections to control. Because the disease occurs in many parts of the world, there is always a chance of its accidental introduction into the United States.

Animals and animal byproducts from areas known to be infected are prohibited entry into this country.

Livestock animals in this country are highly susceptible to FMD viruses. If an outbreak occurred in the United States, this disease could spread rapidly to all sections of the country by routine livestock movements unless it was detected early and eradicated immediately.

If FMD were to spread unchecked, the economic impact could reach billions of dollars in the first year. Deer and wildlife populations could become infected rapidly and could be a source for reinfection of livestock.

What You Can Do

You can support U.S. efforts against FMD by:

- Watching for slobbering, lameness, and other signs of FMD in your herd; and
- Immediately reporting any unusual or suspicious signs of disease to your veterinarian, to State or Federal animal disease control officials, or to your county agricultural agent.

If FMD should appear in your animals, your report will set in motion an effective State and Federal eradication program.

Your participation is vital. Both the early recognition of disease signs and the prompt notification of veterinary officials are essential if eradication is to be carried out successfully. Your warning may prevent FMD from becoming established in the United States, or, if it does spread, reduce the time and money needed to wipe it out.

Additional Information

For more information about FMD, contact
USDA, APHIS, Veterinary Services
Emergency Programs
4700 River Road, Unit 41
Riverdale, MD 20737–1231
Telephone (301) 734–8073
Fax (301) 734–7817

The APHIS Emergency Operations Center
(800) 940–6524
e-mail: emoc@aphis.usda.gov

Current information on animal diseases and suspected outbreaks is also available on the Internet at http://www.aphis.usda.gov.