23rd

Region 5 Regional Response Team Meeting -Chicago - September 12-13, 2001

Wednesday, September 12, 2001

10:00 - 12:00 U.S. EPA Emergency Operation Center (EOC) Tour ***(optional)***

12:30 ~~1:00~~ pm Welcome

aphis at O'Hare 847-298-5220

1:15 pm Foot and Mouth Disease Overview and Discussion
Dr. Kathy Burda, Veterinarian Medical Officer,
Animal and Plant Health Inspection Service (APHIS), USDA

815-547-5053 good

2:15 pm Pyrophoric Iron Deposits in Tanks & Vessels
Marathon Pipeline Co. Settlement
Jim O'Brien, Illinois EPA

3:00 pm Break

3:15 pm Endangered Species Location & Recovery Plan Mapping
Ann Whelan, U.S. EPA Region 5

3:45 pm Federal & State Roundtable

4:30 ~~5:00 pm~~ Adjourn

12:30 Intro
12:45 CRW
1:45 Mark
2:45 Break
3:15 Roundtable
4:30

Thursday, September 13, 2001

~~8:30 am PREP Exercises (Duluth & Ohio/Pennsylvania)~~

9:00 am Hazardous Materials by Rail 312-353-6203 Pager 888-346-035
Bruce M. Mibeck, Railroad Safety Inspector, Federal Railway Administration

10:00 am Break

~~10:15 am Counter Terriorism Update~~

10:45 am Environment Canada Update
Steve Clement, Environment Canada

11:00 am Rapid Response Information System for Weapons of Mass Destruction
Dennis McClosky, FEMA Region 5

11:15 am US EPA Case Study - Indiana Ship Canal Clean-Up
Betty Lavis, On-Scene Coordinator, U.S. EPA Region 5

12:00 pm Adjourn

1:30 pm Tour of the Indiana Ship Canal Site ***(optional)***

bmibeck@fra.dot gov

Charles Kelly
Heart Ideas
1. Heart Ideas
2.

APHIS Factsheet

Veterinary Services

January 2002

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 excessive salivating 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 excessive salivating, 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

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

APHIS Factsheet

Veterinary Services

January 2002

Foot-and-Mouth Disease Vaccine

Foot-and-Mouth Disease

Foot-and-mouth disease (FMD) is a severe, highly infectious viral disease of cloven-hooved animals. Although not usually fatal, it causes suffering and vastly reduces animals' commercial value by reducing their weight and milk output. Cattle, swine, sheep, goats, and deer are highly susceptible and can exhibit signs of infection after an incubation period of only 1 to 8 days; however, the incubation period may last longer and in sheep and goats it may go undetected altogether. Clinical signs include fever and blister-like lesions followed by erosions on the tongue and lips; in the mouth, muzzle, and snout; on the teats; between the hooves; and around the digits.

FMD is widely believed to be the most economically devastating livestock disease in the world, and if it were introduced into the United States, which is FMD-free, it could cause billions of dollars in losses to the U.S. economy. Although the disease is not a risk to humans, people who have worked around or been near infected animals can carry and spread the virus via their cars, clothing, shoes, and even through their respiratory tracts.

The FMD Vaccine

Vaccines are used to produce or stimulate immunity against a particular disease. FMD vaccines are killed virus preparations that are pure, safe, and effective, and they are available to the United States through the North American Foot-and-Mouth Vaccine Bank. Mexico and Canada are also members of the Vaccine Bank.

There are seven different types and more than 60 subtypes of FMD virus, and there is no universal vaccine against the disease. Vaccines for FMD must match to the type and subtype present in the affected area. The North American FMD Vaccine Bank stores different types of concentrated, inactivated FMD virus antigen at ultralow temperatures over liquid nitrogen. In this state, several types of antigen can be kept indefinitely and formulated into vaccine rapidly should an FMD outbreak occur.

FMD antigen is produced by first growing the virus in cell cultures; filtering the virus harvest to remove debris; and inactivating it using a chemical such as binary ethyleneimine. The resulting antigen is then concentrated, purified, and stored in a cold, secure holding facility. The North American FMD Vaccine Bank stores several FMD antigens, which are sent overseas when a specific vaccine needs to be formulated. The Bank can obtain hundreds of thousands of doses of FMD vaccine within days. Animals that receive the vaccine usually develop some degree of protection against clinical signs of FMD within 7 to 8 days.

The North American Foot-and-Mouth Disease Vaccine Bank

The North American FMD Vaccine Bank is housed at the Department of Agriculture's (USDA) Foreign Animal Disease Diagnostic Laboratory (FADDL) at Plum Island Animal Disease Center. The Center, located 11/2 miles off the coast of Long Island, New York, is the only place in the United States where scientists can conduct research and diagnostic work on highly contagious exotic animal diseases such as FMD. Currently, the facilities on Plum Island operate at a biosafety-3 level, which indicates that they are designed, constructed, and operated to prevent the escape of microorganisms from the laboratory into the environment.

Scientists at FADDL monitor FMD outbreaks around the world and stock the North American Vaccine Bank with antigens for the most active serotypes or strains of the virus. If necessary, these scientists can isolate and identify an FMD serotype from a field sample in as little as four days. With this information, FADDL scientists would know what vaccine type to order from an overseas supplier, and if it were not in stock, the supplier could use the isolate to create a new vaccine. FADDL scientists also test currently available vaccines. Their testing has helped ensure that FMD vaccines are not contaminated with other microorganisms and that they do not produce adverse local or systemic reactions following administration.

Reasons to Vaccinate

Emergency vaccination can play an important supporting role in the control of FMD outbreaks in FMD-free countries such as the United States. Vaccination can help contain the disease quickly if it is used strategically to create barriers between infected zones and disease-free zones.

If USDA officials were to determine that FMD vaccinations should be administered to U.S. livestock in response to an FMD outbreak, USDA officials would collaborate with State and local officials to determine vaccination zones, and they would work together to inform livestock producers and the general public of the necessary quarantines and vaccination procedures.

Reasons Not to Vaccinate

Although there are FMD vaccines available, they are not currently used in this country because the United States has been free of the disease since 1929. There is no need to vaccinate against a disease that no animals have, especially when strict import restrictions are in place. USDA's Animal and Plant Health Inspection Service (APHIS) imposes import prohibitions on live ruminants and swine and their products on all FMD-affected countries. In response to the FMD outbreak among some European Union (EU) member countries in early 2001, APHIS has temporarily restricted the importation of live ruminants and swine and their products from all EU member states. If an outbreak occurred here, USDA's first response would be to take swift measures to contain and eradicate the disease.

USDA has several reservations about implementing a vaccination program. First, for animals to maintain immunity to FMD, annual re-vaccination is required. This would be a costly investment and would require considerable effort on the part of animal health technicians, producers, veterinarians, and others involved in the livestock industry. There is also a risk of the disease spreading outside of vaccination zones. For example, vaccine teams could carry the virus from an infected farm to a clean farm if they do not follow proper sanitary procedures. In addition, once the vaccination program starts, the United States might be lulled into a false sense of security. The vaccine does not protect animals against FMD infection; it is designed to protect animals from developing the clinical symptoms of the disease. This means that if a vaccinated animal encountered the disease in circulation, the animal could harbor the virus for several months or years in its upper respiratory tract. Members of the public who do not realize this might allow vaccinated animals to come into contact with unvaccinated animals, including deer and other wildlife, and the vaccinated animals may spread the disease.

Finally, if an FMD vaccination program were implemented in the United States, our country's international trade status would be compromised. Countries that vaccinate for FMD cannot claim FMD-free status, so U.S. livestock exports would face many new restrictions. This could cost U.S. producers millions, if not billions, of dollars. The Office International des Epizooties' current International Animal Health Code requires FMD-free countries such as the United States to undergo a 3-month waiting period between the time they have slaughtered their last vaccinated animals and the time they can claim FMD-free status, assuming ongoing surveillance and serological testing have demonstrated the country's freedom from FMD viral activity. In the event that vast numbers of animals were to be vaccinated or if re-vaccinations were needed, our country could wait years before regaining FMD-free status.

Summary

USDA currently maintains a variety of FMD antigens, which could be swiftly finished and deployed as vaccine if officials determined this to be an appropriate response to an FMD outbreak. There are drawbacks to using the vaccine, including its potentially devastating impact on export markets, so USDA's first response to an outbreak would be one of "stamping out"—freezing animal movement and eradicating the disease immediately.

USDA scientists at Plum Island Animal Disease Center continue to develop and experiment with novel biotechnology to improve the FMD vaccine.

Additional Information

For more information about the FMD vaccine, contact:

USDA, APHIS, Veterinary Services
Emergency Programs
4700 River Road, Unit 41
Riverdale, Maryland 20737-1231
Telephone: (301) 734-8073
Fax: (301) 734-7817

The APHIS Emergency Operations Center
Telephone: (800) 601-9327
e-mail: emoc@aphis.usda.gov

APHIS Factsheet

Veterinary Services

January 2002

Emergency Response: Foot-and-Mouth Disease and Other Foreign Animal Diseases

Surveillance Efforts

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) has a strong system in place for detecting and responding to outbreaks of foreign animal diseases, including foot-and-mouth disease (FMD), in the United States. This system begins with a cadre of certified private veterinary practitioners who partner with APHIS to report any suspected foreign animal disease cases to Federal officials. These surveillance efforts are further augmented by the work of 450 specially trained animal disease diagnosticians from State, Federal, and military ranks who actively search for FMD and other diseases across the country.

Once APHIS learns of a possible disease detection, the Agency immediately dispatches a team of trained diagnosticians to the scene. The diagnosticians are responsible for collecting disease samples from affected animals and establishing initial necessary quarantines. The samples are then sent to APHIS' National Veterinary Services Laboratories (NVSL) in Ames, Iowa, or the Foreign Animal Disease Diagnostic Laboratories (FADDL) on Plum Island, New York, for diagnosis. Foreign animal disease samples receive immediate attention at these facilities.

Responding to a Foreign Animal Disease Detection

If NVSL or FADDL officials confirm that the sample is indeed a foreign animal disease, APHIS and State officials immediately begin investigating the source and trace all animals that may have come into contact with the disease. These officials apprise both State and Federal officials on the status of their investigation and will also initiate emergency response efforts at the State and local level. These measures include notifying State agriculture and, if necessary, public health officials of the disease detection, securing the biosecurity of the affected site, establishing and maintaining animal movement quarantines, and alerting officials in neighboring States. In addition, these officials can recommend that APHIS' Emergency Operations Center in Riverdale, Maryland, be activated to begin coordinating communication efforts and manage, along with State and local officials, disease eradication efforts. Activation of APHIS' Emergency Operations Center would also set off a series of immediate measures designed to detect and eradicate other cases as quickly as possible, with the ultimate goal of returning the United States to disease-free classification in the world marketplace.

APHIS' FMD Response Plan

Because specific outbreak situations vary, and each State's emergency response capabilities differ, APHIS' FMD response plan is designed to be flexible and dynamic. In recent years, with increased attention placed on the possibility of a severe foreign animal disease introduction in the United States, APHIS has been working to partner even more closely with State and Federal agencies to expand the pool of resources available to involved officials. APHIS' FMD response plan taps State and Federal resources as available, and allows the Agency's animal health expertise and coordination skills to fill any remaining gaps.

As part of these ongoing efforts, APHIS has urged States to respond to animal health crises with the same emergency response systems that are in place for other severe emergencies, such as floods and other natural disasters. For States that have adopted such measures, APHIS' FMD response plan enables the Agency to act as a cooperator in initial disease eradication and control efforts. Conversely, for other States without integrated animal health emergency response plans, APHIS' Regional Emergency Animal Disease Eradication Organizations would operate jointly with State and local officials to coordinate FMD response efforts. Regardless of the level of a State's animal health emergency planning, in the event of an FMD detection APHIS officials will work to ensure that a consistent and appropriate response to the disease is carried out not only in the affected area, but in surrounding regions and the rest of the United States.

To accomplish this goal, APHIS also partners with other Federal agencies, including the Federal Emergency Management Agency and the Department of Defense, in regard to animal disease outbreaks. In the event of a significant animal health situation, all relevant Federal agencies have pledged to follow Federal Response Plan guidelines. Should an FMD outbreak occur in the United States, other

Federal agencies would recognize APHIS' expertise in animal health matters and are prepared to give full authority and provide other resources to APHIS as necessary to control and eradicate the outbreak.

APHIS' Emergency Operations Center

Due to FMD's highly infectious nature, any detection of the disease in the United States would warrant immediate activation of APHIS' Emergency Operations Center. Currently, the Center is monitoring the FMD situation in the United Kingdom and France, in addition to other sites around the world, and is ready to act should FMD be found here in the United States. In this case, APHIS officials stationed in the Center would help to coordinate local, State, and Federal response and eradication efforts, coordinate inter-agency planning, and implement national communication and information-sharing strategies. APHIS has already established a toll-free telephone number that concerned citizens and cooperators can call to obtain information on FMD and APHIS response efforts. The telephone number is 1-800-601-9327.

The Emergency Operations Center's other responsibilities during the initial stages of an FMD outbreak would also include immediately notifying animal health officials in Canada and Mexico about the FMD detection and subsequent response efforts. APHIS' North American partners are prepared to implement similar disease surveillance and control measures should APHIS detect FMD in the United States. These steps would assist in safeguarding livestock resources in other areas of North America and help to prevent additional introductions of the disease. On the domestic front, APHIS officials in the Operations Center would also be available to help develop emergency response plans and other interim regulations as needed.

In the event of an outbreak, APHIS officials stationed in the Emergency Operations Center would stay in close contact with U.S. trading partners to provide information and monitor for unnecessary trade restrictions on U.S. products. APHIS must also apprise the Office International des Epizooties, the international animal health governing body, of all steps taken to control FMD.

Stamping Out an FMD Outbreak

APHIS' longstanding FMD response plan includes eradicating the disease by depopulating affected and exposed animals. After confirming an outbreak, the Agency would move quickly to trace infected or exposed animals, establish and maintain FMD quarantines, and destroy infected or disease-exposed animals. APHIS is prepared to work with State and local officials to humanely euthanize animals and dispose of carcasses in approved manners. Additionally, indemnity would be paid to affected producers for the fair market value of their animals.

As a further precaution against a widespread FMD outbreak, Agency officials would also order and have on hand an adequate supply of FMD vaccine from the North American Foot-and-Mouth Disease Vaccine Bank (please refer to the APHIS Factsheet on the FMD vaccine). While APHIS does not believe widespread vaccination is an appropriate first step against the disease, recent exercises simulating an FMD outbreak in North America have shown that vaccinating animals may enhance other eradication activities and help to prevent a more severe outbreak of the disease. Vaccination may also be useful in helping to insulate disease-free areas from areas where FMD is rampant. Should APHIS decide that FMD vaccination is necessary, the Agency is ready to quickly carry out this operation by coordinating vaccination teams consisting of State, Federal, and other veterinary personnel.

Recovering From an FMD Outbreak

Once the FMD outbreak has been brought under control, APHIS' efforts would move toward assisting producers recover from their losses. Specifically, APHIS would evaluate the disease situation in the United States and work to regionalize any remaining affected areas. In this way, disease eradication resources could be focused in key areas, and animals in other parts of the country could be classified as disease-free, making them eligible for interstate movement and slaughter. APHIS would also work with agriculture officials in other countries to relay critical disease monitoring information and keep export markets open for animals certified as disease-free. APHIS officials would meet with Federal, State, and local cooperators to assess FMD response activities after the disease has been eradicated from the United States. Such assessments aid in the development of new strategies for sharing resources and improving response efforts.

For More Information Contact

USDA, APHIS, Veterinary Services
Emergency Programs
4700 River Road, Unit 41
Riverdale, Maryland 20737-1231
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APHIS Factsheet

Veterinary Services

January 2002

Protecting America From Foot-and-Mouth Disease and Other Highly Contagious Livestock Diseases

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) is responsible for protecting U.S. livestock resources from the introduction of harmful, foreign pests and diseases. APHIS works to keep livestock healthy by conducting pest and disease exclusion, detection, eradication, and education activities. The recent foot-and-mouth disease (FMD) outbreaks in Europe, South America, and other areas of the world have underscored the importance of APHIS' animal health safeguarding activities. These activities are critical to keeping FMD and other highly contagious livestock diseases out of the United States.

What is FMD?

FMD is a severe, highly communicable viral disease of cattle, swine, and other cloven-hooved animals. It is characterized by fever and blister-like lesions and erosions on the tongue and lips, in the mouth, on the teats, and between the hooves of affected animals. Many animals recover from FMD infection, but the disease leaves them debilitated. It also causes severe losses in the production of meat and milk. FMD does not affect humans.

Due to its ability to spread rapidly, and because it has grave economic as well as clinical consequences, FMD is one of the animal diseases that livestock owners dread most. The FMD virus can persist in contaminated fodder and the environment for up to 1 month, depending on the temperature and other conditions. There are seven separate types of the FMD virus, in addition to many subtypes of the virus. Immunity to one type does not protect an animal against other types.

FMD can be spread by animals, people, or materials that bring the virus into physical contact with susceptible animals. There has not been an FMD outbreak in the United States since 1929. However, the disease is considered widespread in parts of Africa, Asia, Europe, and South America.

What APHIS is Doing to Keep FMD Out of the United States?

APHIS vigilantly and continuously monitors for FMD worldwide. Whenever FMD outbreaks occur, APHIS initiates regulatory action to prohibit the importation of live ruminants and swine and many animal products from FMD-affected countries. In response to the FMD outbreak among some European Union member countries, APHIS has taken the extra precautionary step of temporarily restricting the importation of live ruminants and swine and their products from all European Union member states.

Due to the recent increase in FMD-affected areas around the world, APHIS officials are on heightened alert at U.S. land and maritime ports-of-entry to ensure that passengers, luggage, cargo, and mail are checked for prohibited agricultural products or other items that could carry FMD. Among other measures, additional inspectors and dog teams have been placed at airports to check incoming flights and passengers.

APHIS prohibits travelers from carrying into the United States any agricultural products that could spread FMD and other harmful agricultural pests and diseases. Accordingly, passengers must declare all food items and other material of plant or animal origin in their possession. They must also report visits to farms or other livestock facilities. Failure to declare any items may result in delays and fines of up to $1,000. Individuals traveling from European Union countries or other countries considered to be FMD-affected must have their shoes disinfected if they have visited farms or other high risk areas.

APHIS also works with the U.S. Armed Forces to ensure the cleaning and disinfection of military vehicles and equipment prior to entry into the United States.

As part of our FMD public education campaign, APHIS is also disseminating information about the disease to USDA partners in industry and in State and local organizations in the United States. We have posted additional advisory signs in airports, broadcasted public service announcements, and established an information hotline and website to inform the public about this important issue and steps they can take to prevent FMD from entering the United States. APHIS is also working closely with the air transportation and travel industries to raise awareness among travelers and airline passengers and crew about the risk of inadvertently spreading FMD.

In addition, Federal and State animal health officials have alerted private veterinarians to ensure heightened monitoring of domestic livestock for FMD. APHIS has an FMD response plan in the event the disease is detected in the United States (please refer to the APHIS Factsheet on the FMD response).

What Does APHIS Do to Prevent the Introduction of Other Highly Contagious Livestock Diseases?

All of the activities APHIS is currently conducting to keep FMD out of the United States are the same ones the Agency uses to prevent the introduction of other harmful and highly contagious livestock diseases. While we have enhanced some of these activities as a direct result of the FMD crisis in parts of Europe, these same activities are routinely practiced by APHIS to protect U.S. livestock resources from a number of foreign animals diseases.

Other foreign animal diseases of concern include: African swine fever, African horse sickness, bovine spongiform encephalopathy, classical swine fever, contagious bovine pleuropneumonia, exotic Newcastle disease, Rift Valley fever, rinderpest, and swine vesicular disease, among others.

What Can You Do to Help?

The success of APHIS' efforts to keep FMD and other harmful livestock diseases out of the United States is dependent upon the support and cooperation of many people, including members of the livestock industry and supporting industries, veterinary practitioners, State and local government officials, Federal officials from other Agencies and Departments, and the general public.

APHIS encourages livestock owners, livestock transport and slaughter personnel, and private veterinary practitioners to report any unusual animal health symptoms to State or local veterinary officials. This is especially important if symptoms are observed in animals that have had contact with other animals at market, in feedlots, or at fairgrounds.

Travelers can make sure they do not bring in prohibited food items and other products, such as soiled footwear and soiled clothing items, that could present a risk of transmitting FMD and other diseases. Travelers should ensure that luggage, packages, and mail are free of any prohibited meats, dairy products, and other at-risk materials before they are shipped to the United States.

In addition, travelers in foreign countries should make note of visits to farms, ranches, or other areas where livestock are raised or kept. Visits to zoos, circuses, fairs, and other facilities and events where livestock and animals are exhibited should also be noted. All such visits should be reported upon return to the United States by answering "yes" to question number 11 on the U.S. Customs Declaration Form ("Have you been on a farm?"). Remember, if in doubt, check "yes"!

Travelers should also shower and shampoo prior to and again after returning to the United States from an FMD-affected country. Launder and/or dry clean clothes before your return to the United States if possible. If you visited a farm or had any contact with livestock on your trip, you should avoid all contact with livestock, zoo animals, or wildlife for 5 days after your return to the United States.

Dogs and cats cannot become infected with FMD. Nevertheless, travelers returning to the United States with pet dogs or cats that had contact with livestock or areas frequented by livestock must make sure the pet's feet, fur, and bedding is free of any excessive dirt or mud. Pet bedding should not contain straw, hay, or other natural bedding. The pet should be bathed as soon as it reaches its final destination and kept separate and apart from all livestock for at least 5 days after entry into the United States.

Horses can be imported from FMD-affected countries as long as the exporting country complies with the FMD-preventive procedures required by APHIS. Upon entry into the United States, additional precautions must be taken. For instance, horses from affected countries must be wiped down with a disinfectant solution. Footwear of personnel accompanying horses, as well as tack and other equipment, must be disinfected. Crates and transportation vehicles for horses must be cleaned and disinfected. Excess feed, hay, straw, and manure aboard the aircraft must be placed in bags for incineration.

For Further Information

For additional information on USDA's actions to protect U.S. agriculture from FMD, access the USDA website at www.usda.gov. Information is given on the types of products prohibited entry into the United States and USDA's other FMD safeguarding efforts. APHIS has also established a toll free telephone number that concerned citizens and cooperators can call to obtain additional information on FMD and APHIS response efforts. The telephone number is 1-800-601-9327.

USDA Safeguarding Measures Against Foot-and-Mouth Disease

- APHIS has taken the extra precautionary step of temporarily restricting the importation of live ruminants and swine and their products from all European Union member States. Live ruminants and their products were already prohibited from all European Union member States due to the risk associated with bovine spongiform encephalopathy.

- APHIS officials are on heightened alert at U.S. land and maritime ports of entry to ensure that passengers, luggage, cargo, and mail are checked for prohibited agricultural products or other items that could carry FMD. Prohibited agricultural products are confiscated and destroyed.

- Among other measures, additional inspectors and dog teams have been placed at airports to check international incoming flights and passengers. Over 200 additional Federal and State personnel are being rotated to cover high traffic international ports of entry in the United States to assist with passenger clearance, cargo inspection, cleaning and disinfection, and mail and small package inspection.

- APHIS has issued numerous alerts to its personnel, reminding them of the need to be particularly vigilant with regard to cargo, passengers, baggage, and mail arriving from the UK.

- In addition, Federal and State animal health officials have alerted private veterinarians to ensure heightened monitoring of domestic livestock for FMD. APHIS has an FMD response plan in the event the disease is detected in the United States.

- APHIS is working with the U.S. Armed Forces to ensure the cleaning and disinfection of military vehicles and equipment prior to reentry into the United States.

- USDA is continuing to emphasize the need for vigilance by our counterparts with the U.S. Customs Service, the U.S. Postal Service, and other Federal inspection agencies, as well as with private shipping companies.

- In order to directly support increased inspection personnel and activities at ports of entry, APHIS is immediately increasing the Agricultural Quarantine and Inspection funding allocation to the field by $11.8 million.

- APHIS is conducting an inspection blitz for mismanifested meat from FMD-affected countries at major ports of entry. APHIS' Smuggling Interdiction and Trade Compliance Officers are also intensifying inspections of butcher shops, gourmet shops, markets, etc, looking for prohibited products.

- APHIS has implemented a public education campaign for travelers that is meant to inform the public about this important issue and provide them with steps they can take to prevent FMD and other exotic diseases and pests from entering the country.

- As part of the FMD public education campaign, APHIS is also disseminating information about the disease to USDA partners in industry and in State and local organizations in the United States.

- APHIS posted an industry alert to livestock owners and private veterinary practitioners to remind them to report unusual animal health symptoms to local agricultural officials.

- As a result of increased awareness of FMD, we are seeing an increase in the number of reports of suspicious lesions and other clinical signs of vesicular diseases. Such reports are immediately investigated by one of the 450 foreign animal disease diagnosticians nationwide. We are encouraging such reporting and distributing educational CD-ROMS on vesicular conditions in swine and cattle.

- We have posted additional advisory signs in airports, broadcasted public service announcements, and established an information hotline and website to inform the public about this important issue and steps they can take to prevent FMD from entering the United States.

- APHIS has created a thorough FMD website with press releases, questions and answers, factsheets, traveler information, a public service announcement, emergency management operation center updates about the worldwide outbreaks, the information hotline number, the FMD brochure, and a training module for veterinarians (www.aphis.usda.gov).

- We are continuing to disseminate information to travelers, a second toll-free number 1- 866-SAFGUARD was developed to provide recorded tips for the traveling public to help USDA keep FMD out of the United States.

- APHIS held a press conference at Dulles International Airport to provide information to and respond to questions from the media about FMD and to demonstrate the process by which international passenger baggage is inspected and international travelers are questioned.

- APHIS is also working closely with the air transportation and travel industries to raise awareness among travelers and airline passengers and crew about the risk of inadvertently spreading FMD. On March 8, we held a conference call for travel writers and other selected members of the media.

- We have provided airline officials with the suggested text for an in-flight announcement before deplaning of arriving flights from the UK. To further ensure awareness of our needs by the airlines, Secretary Veneman sent a letter to the Air Transport Association who in turn informed the heads of the major airlines that fly to and from the UK.

- Caterers, companies, and facilities that handle garbage from incoming international aircraft are being monitored for compliance with existing agreements for safe disposal.

- Teams of U.S. veterinarians (both Federal and State) were deployed to the UK to provide assistance with the eradication program there. We will continue to send teams as requested.

- The Emergency Management Operations Center (EMOC) in Riverdale is staffed with employees from various units within APHIS in an effort to ensure a concerted, efficient and coordinated response to all inquiries. Staff have answered hundreds of telephone calls and e-mails on scientific and technical issues and industry concerns as well as an array of inquiries from the general public about FMD.

- Since the initial FMD outbreak in Great Britain on February 21, APHIS Public Affairs staff has taken an estimated 1,000 media calls.

- USDA has been coordinating and meeting regularly with appropriate federal, state, industry and university officials since the recent FMD cases were discovered. These groups include regional USDA officials, Customs, Defense, state agriculture and veterinary officials, university experts, and airline/travel industry representatives.

- APHIS held two conference calls with the State agriculture commissioners about our exclusion efforts and to offer the opportunity for the commissioners to pose questions. In addition, APHIS officials met with State agriculture officials and industry representatives for an FMD update.

- The Tripartite Exercise 2000, which was an FMD outbreak simulation involving Canada, Mexico, and the United States, resulted in a committed effort by all three countries to collaborate on their efforts to prevent FMD in North America.

Next Steps

- To assist with preparedness, the National Association of State Departments of Agriculture has agreed to explore the acceptable methods of carcass disposal in the States, with each State to assume for this exercise that the largest herd in the State had to be depopulated and carcases disposed of as close to the premises as possible.

- APHIS is conducting a qualitative risk assessment to examine potential pathways of entry of FMD into the U.S. and the relative risk of each pathway. The assessment will also identify any additional steps APHIS should take based on the risks identified.

- Based on the results of the Tripartite Exercise 2000, APHIS is planning to update the FMD response plan (Redbook) to incorporate new information about communication and vaccination in the event of an outbreak.

- There are several outreach materials in production including an FMD 30 second video public service announcement which will be mailed nationally to 1200 tv stations on March 30, an FMD 1:19 second traveler video currently in distribution to all U.S. International airports, and an ID card to help livestock owners identify FMD in their herds.

- APHIS is currently developing an FMD package to be distributed to Extension Agents (and others) which will include a cover letter describing what USDA is doing to safeguard the U.S. from FMD, recommendations for what U.S. residents can do to safeguard the U.S. from FMD, a form for ordering outreach materials, written and camera ready PSAs, and FMD information phone numbers and contacts.

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24 January, 2002

Disposal Considerations

Disposal is an important part of an eradication program when dealing with highly infectious and zoonotic diseases. The most common methods of disposal include burial, incineration, rendering, composting, and alkaline hydrolysis. Each method has advantages and disadvantages; however, the largest concerns about each method are cost, ease, environment, and quantity to be disposed.

Burial

Burial at this time is the preferred method of disposal as far as USDA is concerned. The preferred site would be on the infected premise if there are **NO** environmental concerns. If there are objections to on-farm burial that can not be resolved allowances need to be made for an off-site burial under taking extreme care not to spread disease while transporting to a different site. The location of each burial site is mapped with 2 copies being made one for local files and one for regional files.

Construction of a burial pit is brings up many concerns. The equipment that will be used has an effect on the width and depth of the pit. The carcasses of large animals will need to be slashed in order to decrease gas production which can compromise the integrity of the burial pit. Lime should not be placed on the carcasses directly because the lime will slow down decomposition. Also, there are concerns about the disposal of milk and manure in a burial pit. Follow-up inspections of the burial site must be done to check for any problems.

Incineration

Incineration is only considered when burial is not possible. It has been shown that incineration can decrease the volume of waste by 90%. The high temperatures can destroy the pathogens. Besides environmental concerns about the smoke, just coming up with the fuel needed can be a concern. As an example, to incinerate 1 cow, it has been recommended to use 1 bale of straw, 4-5 old tires, 3 railroad ties, 77 pounds of firewood, 440 pounds of coal, and 1-1.5 gallons of fuel.

Air curtain incinerators may be the wave of the future because there are many environmental advantages. However, this method is newer technology; therefore, it is very expensive and it is not portable.

Rendering

Rendering may not be a viable alternative because the carcasses will need to be taken to the rendering plant. Also, stricter biosecurity will be enforced at the rendering plant with an official on duty at the plant as long as viable pathogens could be present. However, rendering is still considered a disposal option.

Composting

Composting is another method of disposal. With the proper ratios of nitrogen sources, carbon sources, and microorganisms, composting could work. However, the Deputy Administrator for Veterinary Services has to make the decision to approve composting. Composting requires a "fuel" source and time to ensure a properly mature compost pile exists that will not spread disease.

Alkaline Hydrolysis

Alkaline Hydrolysis is a newer technology that, also, takes the approval of the Deputy Administrator for Veterinary Services. The carcasses are placed in an alkaline solution and taken to an elevated temperature. The byproducts are the "sterile" effluent and the ash from the remnants for the bones and teeth. However, the start-up costs are great and the facilities are limited.

Carcass disposal in the middle of an outbreak (really throughout an outbreak) is a very serious business. All agencies must work together in order to stop an outbreak before a disease sweeps through the country. However, in an outbreak, the decisions will need to be made quickly and acted upon quickly to ensure a resolution of the disease.