Functional Exercise:

Foot and Mouth Disease at the County Fair

PARTICIPANT BOOKLET

**This is an exercise and for official use only**

Local Preparedness and Response for Animal Disease Emergencies

2008
Preparing for an animal disease emergency involves assessment of local vulnerabilities and assets as well as determining the personnel and resources need to protect, respond to and recover from the incident and the roles and responsibilities they may have during an incident. This exercise was designed to assist local communities in testing their local response plan and local capabilities for the initial response to an animal disease emergency.

Statement of Purpose
The purpose of this exercise is to help local communities to prepare for the necessary tasks and personnel requirements that may be needed for response to an animal disease emergency.

Actions needed may include:
1. Quarantine / Access control
2. Disinfection / Decontamination
3. Communications with the public
4. Animal Disposal assistance
5. Worker Safety and Health

Goals of Exercise
The goals of this exercise are
1) Activate the county’s local EOC with the appropriate response personnel needed for an animal disease emergency
2) Implement the county’s animal disease emergency plan, and
3) Determine the roles and responsibilities of individuals, departments or agencies in the response and support tasks at the county level for an animal disease emergency.

This exercise is a role-playing exercise, but will not involve physical deployment of assets beyond the Emergency Operations Center. The exercise should be completed in roughly 2-3 hours with medium levels of stress, complexity & time pressure.

Introduction
Animal agriculture is an essential component of Iowa’s economy. The impact of an animal disease emergency or outbreak in livestock could be devastating. Preparedness is essential for the prevention and control of such an event in Iowa, to protect animal health, our economy and possibly human health. Response to such a situation will require interaction between local, state and often federal agencies and personnel.

Foot and Mouth Disease, or FMD, is a highly contagious viral disease that affects cloven-hoofed (two-toed) animals. This includes cattle, pigs, sheep, goats, deer, and others; FMD does not affect horses, dogs, or cats. FMD is not considered a public health risk. The disease is considered one of the top diseases of concern for an animal disease emergency because it can spread quickly and cause great production losses in affected animals. Detection of the disease in any country also initiates economic impacts from the embargos and trade restrictions that would occur. In efforts to control the spread of disease, affected and exposed animals will need to be
depopulated, and properly disposed; the premises will also need to be thoroughly cleaned and disinfected. Any persons, vehicles, equipment, etc. allowed onto the farm must be cleaned and decontaminated before being allowed to leave the premises; again this is to reduce the risk of further spread of this highly contagious disease. More information on Foot and Mouth Disease can be found in the Foot and Mouth Disease FastFact.

**Exercise Plan**
The exercise will simulate the initial local response to an animal disease emergency (outbreak of foot-and-mouth disease in livestock).

**Summary of Exercise**
This functional exercise tests the immediate (first hours) local response to an apparent foreign animal disease case at the county fair. The exercise gives county officials the opportunity to practice their ability to provide initial quarantine, access control, disinfection, and public communications support. The county emergency management team is also asked to evaluate their ability to provide the heavy equipment needed for movement and burial of euthanized animals.

**Rules of Conduct**
All participants will act according to the policies and procedures of their position. Participants will assume they have access to the resources and personnel that they normally have access to. Information received during the exercise should be treated as valid within the context of the exercise.

**Safety Issues**
If an actual emergency arises the code word “Real World” will be used to ensure participants know it is not part of the exercise.

**Objectives to be evaluated**
1. Activate the county EOC and determine the appropriate personnel involved in the management and coordination of response and support for an animal disease emergency (ADE).
2. Implement the county’s animal disease emergency plan.
3. Determine the necessary quarantine and access control resources needed for an ADE situation.
4. Determine the necessary resources to establish and support the needed decontamination and disinfection actions for an ADE.
5. Establish communications between agencies involved and the flow of information within the EOC, to the Incident Command Post and to the public.
6. Determine the necessary resources to support the animal disposal needs for an animal disease emergency.

The post exercise discussion should also address the potential impacts to the local community and businesses as a result of the animal disease emergency (e.g., injuries, mental health, crowd control, information dissemination).
Exercise Situation

It is late July, and it definitely feels like summer in Iowa! At the county fair, the fair veterinarian is completing his evening rounds in the livestock barn. Because of the heat, fans have been set up to increase ventilation in multiple sites throughout the barn, and water buckets are topped off every couple hours. The vet passes by the cows and sheep. Most are resting or grazing, they generally look good. He rounds the corner to check the pig pens and notices one of the sows is limping. He hops into her pen to get a closer look and finds a blister above one of her back hooves. Although this lesion could be from a variety of causes, he doesn’t want to take any chances of this being foot-and-mouth disease (FMD). He makes a call to State Veterinarian.

After speaking with the State Veterinarian, the local veterinarian calls the fair’s livestock director to inform him of the situation. Meanwhile, the State Veterinarian contacts the Federal Area Veterinarian in Charge (AVIC). They determine that a Foreign Animal Disease Diagnostician (FADD) should be sent to investigate. Individuals in Iowa who are FADDs are either a state district veterinarian or a USDA Veterinary Medical Officer.

The state district veterinarian / FADD arrives at the fairgrounds shortly and examines the pig herself. She too feels this case should be investigated further. She reports back to the state veterinarian and the Federal AVIC. Together they determine that samples should be collected and sent to the Foreign Animal Disease Diagnostic Laboratory in Plum Island, New York for diagnosis. The Federal AVIC will assign a foreign animal disease case number and arrange for the samples to be tested at Plum Island. They all agree it is best to quarantine the fair animals until a diagnosis is received based on the samples submitted.
Post-Exercise Review / Hot Wash

What parts of the plan and response worked well?

What parts of the plan and response were lacking?

Plan Activation
- Were the correct people / departments / agencies part of the initial response? Are there others who should be included?
- Was the call down list accurate?

Quarantine / Access Control
- Were we able to establish the quarantine at the fairgrounds and 6.2 mile access control perimeter promptly?
- What if the access control perimeter needed to be at a different location in the county? What if the perimeter covered part of an adjacent county or state?
- How long would we be able to sustain such an operation?
- How easily can we accommodate needed emergency responses (ambulance, fire, rescue) across and within quarantine and access control lines?
- How might weather impact our ability to provide access control? thunderstorms, cold, snow, strong wind
- What if within 6 hours of the first request there was a request to quarantine the farm where the sick pig came from? The 6.2 mile access control perimeter may need to be duplicated around the farm or the existing perimeter might simply be expanded to include the farm depending on the location.

Decontamination / Disinfection
- Were we able to establish decontamination / disinfection stations promptly?
- Are there any environmental concerns associated with the large scale efforts at the fairgrounds?
- How would varying weather conditions (thunderstorms, wind, cold, freezing weather) affect our efforts?
- Do our resources and procedures for disinfection allow adequate privacy and security for personal belongings when applied to a large group of people?

Public Communications
- What are the main messages we need to communicate to the public in an animal disease emergency?
- What information would we want the people at the fairgrounds as well as fair animal owners to know? How will we communicate with these audiences?
- How will we at the county level work with state and federal resources? What would we handle locally and what would be referred to the Joint Information Center?
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Other

• What efforts can be made in advance to minimize local business disruption?
• What can be done during an animal disease emergency to minimize local business disruption?
• What are the mental health needs and resources available during an animal disease emergency?
• Are we able to document our resource utilization for possible future reimbursement by the Federal Government?

Euthanasia / Burial assistance

• Do we have access to the needed equipment?
• What is the time frame to access and move into position the needed equipment?
• How long would it take to dig appropriate sized trenches given the equipment available?
  (A rough estimate is 1.5 yd³ of trench is needed for every 1,000 lbs of animal carcass and approximately 100 yd³/hr can be excavated by a back hoe for each cubic yard of bucket size: Carcass Disposal: A Comprehensive Review, National Agricultural Biosecurity Center Consortium, USDA APHIS Cooperative Agreement Project, Carcass Disposal Working Group, August 2004)
**FAST FACTS**

**Foot-and-Mouth Disease (FMD)**

**What is FMD and what causes it?**

Foot-and-mouth disease is a viral disease of cattle, pigs, and other cloven-hoofed (two-toed) animals. FMD causes painful sores and blisters on the feet, mouths and teats of animals. The disease occurs in parts of Asia, Africa, the Middle East and South America. The disease has been eradicated from North America, most of Europe as well as Australia, New Zealand, Greenland and Iceland. The last U.S. outbreak of FMD occurred in 1929.

**What animals get FMD?**

FMD affects cattle, pigs, sheep, goats, deer, and other cloven-hoofed animals. Cattle are considered indicators, since they commonly show signs of illness. Pigs are amplifiers of the disease, meaning when infected with FMD they make large amounts of the virus that can infect other species. Infected sheep and goats typically have milder signs of illness, which often go unnoticed. They serve as maintenance hosts for the virus and may spread it to other animals.

**How can my animal get FMD?**

The disease is spread by direct contact such as when a healthy animal touches, rubs, or licks an animal that is sick. It can also be spread when healthy animals eat (oral) from a feed trough where an infected animal has eaten or drooled saliva. The virus can also travel through the air (aerosol) when an animal coughs or sneezes. Finally, people can be an unexpected means of transmission (fomites). FMD virus can be carried on clothes, shoes, vehicles and even in the nasal passages of people that have had contact with infected animals.

**How does FMD affect my animal?**

In general, the most common sign of foot-and-mouth disease is the formation of sores on the tongue, mouth, feet, and teats. Infected cattle are depressed, reluctant to move, not able to eat which can lead to a decrease in milk production. They also drool, and in many cases, make a loud smacking sound. Pigs with the disease often have sore feet but less commonly develop oral lesions. In sheep, the illness is difficult to recognize. They are less likely to develop mouth sores and lameness from this disease.

**Can I get FMD?**

No. People do not develop significant illness from FMD. It.

**Who should I contact if I suspect FMD?**

Contact your veterinarian immediately. Foot and mouth disease is not currently found in the United States; suspicion of disease requires immediate attention.

**How can I protect my animal from FMD?**

FMD is considered a foreign animal disease and has not been found in the United States since 1929. The best approach to prevention is surveillance.

Becoming aware of the signs of the disease (sores in the mouth, on the feet, teats) and the conditions resulting in the transmission of the disease (the introduction of infected animals into the herd, or contaminated feed or objects from unknown sources) is the best way to protect your animals.

The best defense in a FMD outbreak is to limit all contact with animals and visitors and quarantine all newly introduced animals for a period of time established with your herd veterinarian.

**For More Information**

CFSPH Technical Fact Sheets: Foot and mouth disease at http://www.cfsph.iastate.edu/DiseaseInfo/


OIE Disease Cards: Foot and mouth disease at http://www.oie.int/eng/maladies/fiches/a_A010.htm