# Kansas: The Nation's Leader in Confronting Foreign Animal Disease Threats

**Overview**
With our strong agriculture heritage, Kansans understand the potential threat of foreign animal diseases to our nation's agricultural and food infrastructure. In addition to the devastating impacts of such an outbreak on the economy, some animal diseases could potentially be transmitted to humans. Kansas is considered the gold standard in research to ensure the safety and security of our state and nation's food supply, as well as preparedness to respond to naturally occurring or intentional foreign animal disease threats.

**Background**
Kansas' livestock industry is a major contributor to the economy of the state, the nation, and the world. Foreign animal diseases, e.g., foot and mouth disease, have the potential to affect livestock and wildlife, resulting in grave economic consequences for Kansas and the nation. The estimated consequences of a foreign animal disease outbreak require preparedness to respond quickly to such an event.

Federal and state entities are working around the clock to try to prevent a foreign animal disease from entering the United States, but it is impossible to oversee every aspect of our livestock industry.

So Kansas has taken a proactive approach, recognized as a national model, to protect the safety and economic vitality of the state's livestock industry, as well as public health.

The Kansas Animal Health Department (KAHD) leads the state's foreign animal disease control efforts. To monitor and control the spread of foreign animal disease, the agency licenses and regulates public livestock markets, feedlots, disposal plants and trucks, and livestock dealers. All livestock sold at a public livestock market are inspected for contagious and infectious diseases. Field staff also investigates any suspicious disease or aliment that is reported by private practitioners. Quarantines are imposed on livestock being imported from areas of high disease and are retested to insure that Kansas does not import disease.

Perhaps more importantly, KAHD has developed, implemented, and practiced a foreign animal disease emergency plan and is constantly improving upon that plan through cooperative emergency planning and exercises with Kansas counties, agencies, producer groups, and private entities that would be involved in a response.

**Kansas Foreign Animal Disease Plan**
KAHD's foreign animal disease plan includes all the necessary policies and provisions for responding to an actual or impending foreign animal disease outbreak. The plan identifies existing agreements and memorandums of understanding among responding agencies, whether state, federal, professional, or voluntary. These agreements establish policies to protect lives, property, and the agricultural community through efficient and coordinated response procedures. Kansas' Foreign Animal Disease Plan has the following elements:

**Mitigation**
***Awareness:*** Producers, veterinarians, and inspectors take risk reduction measures against all types of diseases on an ongoing basis. However, the potential threat of intentional contamination of livestock requires heightened prevention measures.

- KAHD's Domestic Animal Health Permit Program for livestock dealers and interstate certificates of veterinary inspection ensure that most livestock movements can be rapidly traced.
- KAHD, in partnership with the U.S. Department of Agriculture (USDA), is implementing an ongoing public information program to advise the public and the agricultural community of protective actions that can be taken to limit the possibility of spreading disease both here and abroad.

Kansas' plan recognizes that the best way to prevent a foreign animal disease outbreak, and the only way to contain one, is to create working partnerships among local farmers, truckers, feedlot owners, and other critical members of the food-supply chain. Additionally, through education and actual foreign animal disease incident exercises, Kansas has developed close working relationships between these groups and criminal investigators; veterinarians; and animal and plant health inspectors.

***Surveillance:*** Producers are the state's first line of defense against foreign animal diseases. Surveillance is essential to controlling and eradicating all animal diseases. Producers are required by law to call veterinary professionals at the first sign of contagious or infectious disease. Private practitioners must contact KAHD or USDA if they suspect a foreign animal disease.

Veterinary inspectors at slaughter plants are the second line of defense performing ante mortem and post mortem examinations to determine signs of infection. Immediate notification to the Kansas Department of Agriculture, which will subsequently notify KAHD and USDA, is required if the inspector suspects the presence of a foreign animal disease in carcasses. Such notification may trigger an immediate shut down of the plant to prevent further spread of the disease.

***Stop Movement:*** If a foreign animal disease is confirmed, the Kansas livestock commissioner will receive authority from the governor to order Kansas law enforcement to stop movement in Kansas. The intent of the stop movement order is to halt the spread of the disease and to contain the pathogen of concern.

Law enforcement will establish road blocks (checkpoints) within counties and on state borders to restrict movement of all susceptible livestock and livestock-related equipment and traffic, including livestock feed, feed trucks, milk trucks, empty trailers, and others.

Movement permits are official documents to be completed by law enforcement officers at checkpoints and issued to stopped livestock haulers and other affected transits. Movement permits will determine which of the following destinations best fits each transport depending on the risk of spreading the disease:

- Return to the point of origin unless they have come through an infected/quarantine area or unless they would have to go through an infected area to return to that point of origin.
- Continue to destination only if slaughterhouses and other facilities are still accepting livestock, but not if they have come through an infected/quarantine area or would have to go through an infected area to proceed to destination.
- Divert (and escort) to pre-selected county diverted holding sites for unloading and disease surveillance, but not through an infected/quarantine area. This applies to any livestock or other affected transits that cannot return to point of origin or proceed to destination.

**Preparedness**

KAHD's foreign animal disease plan provides the framework for coordinating planning efforts among all participating agencies. As part of the preparedness cycle, the plan is reviewed frequently and updated as necessary due to changes in condition or as a result of findings during training, exercises, or actual incidents. At a minimum, this plan undergoes a formal annual review and includes a review of assigned participants to address attrition and functional competence.

***County Planning Efforts:*** Because county assets and first responders will be called to support foreign animal incident response actions within their jurisdictions, KAHD provides assistance to counties in developing integrated and coordinated foreign animal disease emergency procedures.

***Training:*** KAHD and USDA have an ongoing program to provide emergency training for emergency responders. Training participants include: Kansas Volunteer Veterinary Response Corps (KVVRC); emergency management; law enforcement; livestock producers; consumers; county extension agents; and support agencies (federal, state, local, and volunteer).

The Kansas State University College of Veterinary Medicine continues to support general consumer awareness and specialized training for producers and responders. In addition, the Kansas Bureau of Investigations requires officers

to participate in foreign animal disease -related training to ensure recognition of possible threats and adequate response measures are undertaken.

***Exercises:*** KAHD facilitates foreign animal disease exercises in Kansas. Exercises bring together supporting state and federal agencies, local governments, producers groups, individual producers, and private practitioners. These activities are considered a critical component of preparedness efforts. Lessons learned as a result of interagency exercises have been helped to develop policies, procedures, and relationships.

**Response**

A foreign animal disease outbreak is the exception to the implicit disaster management rule that local governments have ultimate control of response operations with support from state and federal counterparts. Unlike natural disasters such as floods and tornadoes, the response of the federal government is required from the onset. A foreign animal disease disaster declaration by the secretary of USDA, which provides federal funding for response and recovery actions in animal health incidents, will be triggered exclusively after official USDA laboratory testing, reinforced by other epidemiological information, indicates conclusively the presence of a foreign animal disease in the United States.

The U.S. Department of Homeland Security has determined that while the nation is deemed to be at risk of terrorist threat, the first confirmed positive (index) case in the nation is to be treated as a terrorism incident until proven otherwise. Such an incident will generate immediate and appropriate local, state, and national measures to eliminate the crisis and minimize consequences.

***Diagnosis:*** Discovery of a suspect case requires immediate notification to the KAHD or USDA for sample collection and expedited transportation to the National Veterinary Service Laboratory on Plum Island, New York. KAHD will deploy a diagnostician to the site soon after the initial report from the veterinarian practitioner is received. A foreign animal disease investigation, including required laboratory testing, will be conducted in an accelerated manner based on observations of the diagnostician.

As part of the investigation, the diagnostician will determine the likelihood of a highly contagious disease. This determination will help classify the case as “unlikely,” “possible,” or “highly likely.” At a minimum, the diagnostician may quarantine the suspect site until laboratory results rule out a foreign animal disease, during which time a state quarantine of the site may be implemented, in particular if:

- The presence of a foreign animal disease is suspected or has been confirmed in the United States.
- A credible terrorist threat to livestock in Kansas or anywhere in the nation has been received.

When a case is classified as highly likely, the diagnostician will notify and consult with the USDA area veterinarian in charge and the livestock commissioner. Samples submitted to an approved laboratory are treated as “Priority 1” to ensure that a presumptive diagnosis is reached within 24 hours or less.

***Notification:*** Based on consultation between the diagnostician, livestock commissioner, and USDA, and a previous confirmation of a foreign animal disease in the U.S., all required response and notification measures are to be taken:

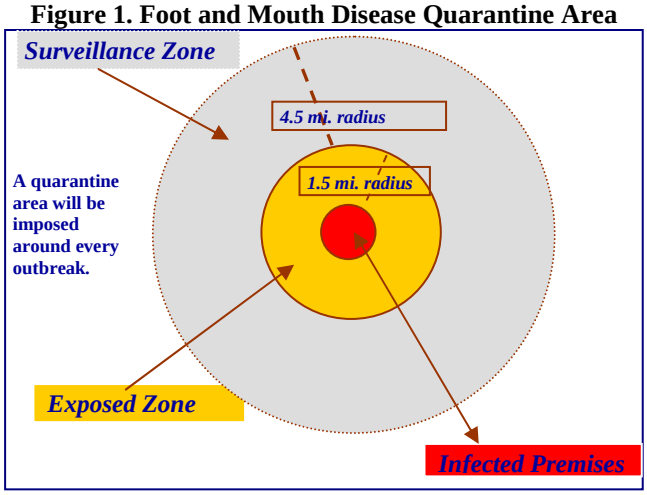
- A state quarantine will be placed on the premises (now labeled “infected area”).
- The livestock commissioner or designated representative will notify the governor and the Kansas Department of Emergency Management.
- The governor shall issue a proclamation with the details of the quarantine area and sanitary measures as defined by the livestock commissioner.

***Quarantine:*** The livestock commissioner has the authority to order any quarantine and/or sanitary measures necessary to control potential outbreaks of disease in animals and has the authority to direct county sheriffs to implement prescribed quarantine measures.

Local law enforcement’s first priority would be to establish and enforce a strict quarantine area, as defined by animal health officials, around the infected premise. This quarantine area, as shown in Figure 1, would be a six-mile radius surrounding the point of origin (approximately 113 square miles in total land mass). No vehicles, equipment,

or persons would be allowed to enter or leave this quarantine area without detailed decontamination and authorization. Approximately 40 roadblocks would be required to secure an entire quarantine area. Inside the quarantine area, an "exposed zone" would be established in which all cloven-hoofed animals would be destroyed.

**Figure 1. Foot and Mouth Disease Quarantine Area**




***Stop Movement:*** Confirmation of a foreign animal disease will trigger the Kansas livestock commissioner, under the governor's authority, to issue a stop movement order. Under such an order, Kansas law enforcement will stop movement of livestock and livestock related equipment and traffic throughout Kansas. The intent of the stop movement order is to halt the spread of the disease and to contain the pathogen of concern.

***Surveillance:*** Surveillance within the surveillance zone will include slaughter surveillance, serological surveys, and investigation of reports of suspect disease. It will include livestock and poultry facilities and susceptible wildlife populations if present. The level and direction of surveillance will be driven by epidemiological information.

Surveillance outside the quarantine area will be accomplished by slaughter surveillance, serological surveys, and investigation of reports of suspect disease.

***Economic Zone Designation:*** Economic zone designations may help reduce adverse economic effects as a result of an endemic disease. If a disease is only established in a part of Kansas, it may be possible to establish infected and disease-free zones in order to retain some economic benefit. Disease-free zones, designated by the livestock commissioner, must be effectively sealed off from the disease-affected zones by extremely tight movement and quarantine controls.

***Vaccination:*** Vaccination for a foreign animal disease can be used in a number of different circumstances. Vaccine use could be sought by KAHD under a number of scenarios:

- Ring vaccination could be used to vaccinate susceptible, but not yet exposed, animals. These resistant animals would form a barrier that would slow the progression of the foreign animal disease.
- If within the quarantine area there are facilities containing large numbers of susceptible animals, e.g. feedlots, dry lot dairies, swine confinement facilities, etc., vaccines could be used to protect these facilities.

By preventing infection of these facilities, problems associated with euthanasia of large animals are avoided and meat is preserved for human consumption.

**Recovery**

A variety of forces may influence the direction of the recovery process. Kansas will support local governments, businesses, and citizens in recovering from the impact of any emergency including foreign animal diseases. Where possible, hazard mitigation measures will be incorporated into recovery activities in order to lessen the impact of reoccurrence or eliminate it.

The outbreak is considered over when all eradicated premises have been completely cleaned and disinfected and there have been no new cases for at least twice the incubation period of the disease. Restocking will not take place until the outbreak is over in a defined area

**Foreign Animal Disease Incident Exercises in Kansas**
Kansas State University was focused on protecting the nation's food supply and agricultural infrastructure from terrorism even before September 11, 2001. The possibility that agricultural or public resources will be targeted is a reality that K-State's National Agricultural Biosecurity Center (NABC) has confronted for years.

The NABC has played a critical role in getting local, state, and federal officials to talk to each other and plan effectively for such an attack. In the last five years, the NABC has led four exercises with the help of significant federal grants. In all, the NABC's expertise has been tapped for 13 exercises at the local, state, and national level ranging from radiological contamination of the water supply to a nationwide outbreak of foot-and-mouth disease (FMD). The NABC is considered by many to be the first place to go for advice on how to mitigate agroterrorism.

The following is a summary of four exercises organized by the NABC:

*Exercise High Stakes – 2003, Topeka, Kansas*
This exercise tested how officials would mitigate a terrorist-introduced outbreak of FMD. Gaps identified included the need to train the National Guard to help quarantine and stop livestock movement in Kansas, a shortage in the number of veterinarians to euthanize animals, and the need to identify sites to bury carcasses. Roughly 130 county, state and federal officials from more than 20 agencies took part. The USDA's Animal Plant Health Inspection Service funded the exercise.

*Exercise Sudden Impact – 2004, Dodge City, Kansas*
This exercise looked at how first responders, public health officials, and industry partners in Ford County would react to the introduction of a zoonotic foreign animal disease. The exercise assessed the effectiveness of public health quarantine and identified issues associated with law enforcement and communication. The exercise was funded by the National Institute of Justice.

*High Plains Guardian – 2004, Topeka, Kansas*
This exercise looked at the roles of the military and Kansas' foreign animal disease plan with regard to an FMD outbreak. Limited access to federal resources; the need to contract with private groups for surveillance, herd depopulation and carcass disposal; and the need to work with neighboring states to halt livestock movement were highlighted. More than 80 participants from multiple states and federal and local agencies took part. This exercise was funded by the U.S. Department of Defense.

*Endangered Species – 2005, Hutchinson, Kansas*
This scenario involved the intentional introduction of FMD and other terrorist acts at the Kansas State Fair to disrupt a national election. The focus of this exercise was prevention and the familiarization of law enforcement with sophisticated state and federal information sharing and the importance of human intelligence. The need for clear communication between agencies and with the public was a common theme. Around 110 people from nearly 50 agencies spanning three states took part. This exercise was funded by the National Institute of Justice.