

UNITED STATES ANIMAL HEALTH ASSOCIATION – 2007

RESOLUTION NUMBER: 33 APPROVED

SOURCE: COMMITTEE ON DIAGNOSTIC LABORATORY AND
VETERINARY WORKFORCE DEVELOPMENT

SUBJECT MATTER: VEHICLE RESTRICTIONS IN FOOT-AND-MOUTH
DISEASE QUARANTINE REGIONS OF HIGH
DENSITY FOOD ANIMAL POPULATIONS

DATES: RENO, NEVADA, OCTOBER 18 – 24, 2007

BACKGROUND INFORMATION:

There are approximately 500,000 dairy cows and calves in a 40 mile radius of Tulare, California. Dairy operations and calf facilities are often located across rural roads from each other or short distances away. California's Highway 99, a heavily used north/south vehicle and trucking corridor runs through the center of the Tulare milk shed. Similar densities of food animal livestock operations are scattered throughout the nation.

In the event of a foot-and-mouth disease (FMD) outbreak within or near the Tulare milk shed, there are United States Departments of Agriculture (USDA) and Homeland Security (DHS) vehicle restrictions that would affect ingress/egress. Also the United States Federal Bureau of Investigation (FBI) restrictions may occur until intentional disease introduction is ruled out.

Vehicle quarantine measures as part of the FMD management/eradication program could prove to be more costly within the milk shed than the disease itself. Most of the large Tulare calf ranches, which may consist of up to 80,000 animals per ranch, have only 4-12 hours of feed inventory available, thus making them vulnerable to restricted movement of feed. Dairy farms and most feedlots will be somewhat less susceptible to the feed availability problem, but given enough time, they too will suffer great losses due to nutritional deficits. Moving fresh dairy milk off site will be an issue and the alternative of disposing milk in manure pits creates major waste management problems. Rapid and efficient disposal of dead stock will quickly become a vehicle related issue.

Dairy and calf operations must have the ability to obtain feedstuffs and transport milk and dead stock in a timely manner during FMD quarantines. Disinfection protocols are needed for vehicles to avoid animal health and animal welfare adverse effects.

RESOLUTION:

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA), Agriculture Research Service (ARS) and the Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) and the United States Department of Homeland Security (DHS), Office of Health Affairs and the United States Federal Bureau of Investigation (FBI) to jointly develop protocols for vehicle movement in foot-and-mouth disease (FMD) outbreak areas with high density populations of food animals.

USAHA urges these agencies to formulate disinfection protocols for transportation modalities of feed, milk and dead stock during an FMD outbreak.

USAHA urges these agencies to evaluate the current status of FMD real-time pen-side diagnostic and milk tanker tests which are needed to ensure vehicles do not further the spread of FMD.

RESPONSE:

USDA, Agriculture Research Service

For Resolution 33 regarding vehicle movement protocol, the Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) has primary responsibility over these areas. Therefore, ARS has referred this resolution to APHIS, which has agreed to take the lead on these issues and to respond on behalf of USDA. However, ARS will be pleased to offer our support to APHIS, the Cooperative State Research, Education, and Extension Service, and other Federal institutions on any actions that are initiated to address needs in these areas.

As for the specific request in Resolution 33 to evaluate the status of Foot-and-Mouth disease (FMD) diagnostic and tanker tests, ARS has been conducting research at the Plum Island Animal Research Center. Specific efforts have included the development of a real-time polymerase chain reaction (RT-PCR) test for the rapid detection of the FMD virus. ARS scientists demonstrated that the RT-PCR test was capable of detecting the FMD virus in milk, and the test was transferred to APHIS for its validation and optimization on various types of samples including milk.

ARS efforts to improve biosecurity surrounding milk products also take place at the Eastern Regional Research Center (ERRC), where researchers have been working to develop a new filter system that can be installed on milk tankers. Preliminary tests have shown that the filter can effectively block the passage of viruses similar in size to FMDV from leaving the milk tanker during transport, demonstrating that the filter is likely to block FMDV as well and would permit milk

to be safely transported off farms without risk of contamination. Further testing and improvements of the filter are necessary, but these efforts will continue in partnership with ARS collaborators. ERRC researchers also have been and will continue studying effective pasteurization techniques that can inactivate the FMD virus. To date, research has shown that the high-temperature, short-time pasteurization technique can greatly reduce the risk of its transmission by milk.

U.S. Department of Justice, Federal Bureau of Investigation

Directing and administering protocols for vehicle movement restrictions that serve public health and safety goals are all evolution that falls outside of the purview of the FBI. The USDA in coordination with state departments of agriculture would be responsible for managing quarantine zones in a Foot-and-Mouth Disease (FMD) outbreak. These agencies would then call on numerous entities to provide support services. Additionally, under the Incident Command System, the state departments of agriculture could task the Incident Command /Logistics section to locate equipment and personnel from private, state, and federal resources.

The FBI involvement with vehicle restrictions in FMD quarantine regions would be limited to the need to comply with appropriate cleaning and decontamination of our personnel, equipment, and possible evidence that would have to enter and leave the quarantine zone for investigation purposes. The FBI would follow the USDA's cleaning and disinfecting standard operating procedures for the entry and exit of personnel and vehicles as well as their guidelines that apply to the investigation's logistics such as the use of personal protective equipment and vehicle decontamination procedures.

The WMD Directorate of the FBI would support the creation of any such protocols that are developed resulting from your organization's Resolution 33 as appropriate.

USDA, APHIS, Veterinary Services

The U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services (VS) recognizes the United States Animal Health Association's concerns and appreciates the opportunity to respond. The National Veterinary Services Laboratories (NVSL) has conducted studies to evaluate the viricidal activity of several chemical biocides against foot-and-mouth disease (FMD) virus when applied to concrete, rubber, stainless steel, hard wood, or soft wood, following applicable U.S. Environmental Protection Agency (EPA) testing guidelines. VS Emergency Management & Diagnostics is currently facilitating an interagency agreement between EPA and USDA's Agricultural Research Service to conduct additional disinfectant studies.

NVSL is meeting with its counterpart laboratories in Canada and Australia to discuss joint evaluation criteria and procedures for use of pen-side diagnostics.

Preliminary work to determine sensitivity and specificity of the current FMD real-time polymerase chain reaction (RT-PCR) assay using bulk milk samples has been performed as part of a joint study between the USDA ARS and the APHIS Foreign Animal Disease Diagnostic Laboratory. Although there are limited resources available for this work, the NVSL considers this a priority and will work to validate the FMD RT-PCR assay using the bulk milk sample. In addition, the NVSL intends to form collaborations with international laboratories that will allow for the evaluation of the PCR as well as other pen-side technologies that could be utilized with this sample type.