RESOLUTION NUMBER: 11 Combined with 25 and 30   Approved

SOURCE:  COMMITTEE ON ANIMAL EMERGENCY MANAGEMENT
          COMMITTEE ON CATTLE AND BISON
          COMMITTEE ON FOREIGN AND EMERGING DISEASES

SUBJECT MATTER:  Foot-and-Mouth Disease   National   Movement   Standstill
                 Exemptions: Bovine Germplasm

BACKGROUND INFORMATION:

A group of stakeholders from the bovine germplasm industry, state and federal animal health officials, and veterinary diagnostic laboratory representatives are collaborating to create guidance criteria to allow domestic movement of bovine germplasm and high genomic merit animals located in a regulatory control area during a foot-and-mouth disease (FMD) outbreak in the United States (US). The Bovine Germplasm Movement Plan is a guidance document being developed through funding provided by the United States Department of Agriculture (USDA) National Animal Disease Preparedness and Response Program. Maintaining safe domestic movement of germplasm and high genomic merit animals from their birth location into the genetic system is the focus of this guidance. This provides business continuity opportunities for the entire cattle industry and preservation of genetic material.

The bovine germplasm industry consists of semen production, oocyte harvest, and embryo production. Most of the new genetic stock in both dairy and beef industries is produced by artificial insemination and embryo transfer. It is estimated that 70-75% of dairy cattle and 10% of beef cattle in the US are bred by artificial insemination (source: National Association of Animal Breeders (NAAB), Certified Semen Services. Frozen semen and embryos are shipped to cattle operations in all 50 states (source: NAAB and the American Embryo Transfer Association).

Every year, millions of doses of bovine semen and nearly 0.5 million bovine embryos are transported in the US from their site of collection/creation to laboratories for quality control and further processing and moved to livestock facilities for use in cattle. There are only 3 of the 48 contiguous US states (Georgia, Montana, South Dakota) with interstate movement requirements for semen and embryos, as of October 2023. The movement of germplasm to non-livestock facilities during an FMD outbreak is the focus of this resolution. Specific examples include:

• Oocytes collected from live female donors and shipped overnight to a laboratory without livestock.
• Semen collected from bulls shipped frozen to laboratory or storage facility without livestock.
• Embryos shipped frozen to laboratory or storage facility without livestock.

The USDA FMD Response Plan October 2020 draft provides guidance on a movement standstill under Section 4.10.1. Specifically, “A national (or regional) standstill includes stopping the sending and receiving of all live susceptible animals as well as semen and embryos from susceptible animals.”

Further, it describes that “the USDA will provide clear concise policy guidance on the implementation and provisions of, made easily accessible to all stakeholders. Specifications of issuance will at least be defined for: …

4. a specific list of what items are restricted from movement (e.g., live swine and germplasm); and”

The risk mitigation step in the national movement standstill is to prevent livestock exposure to FMD virus through movements. Any germplasm that is moved during the standstill to storage, quality control laboratories, and other locations that do not house livestock should not pose a direct exposure risk. Germplasm storage tanks leaving a livestock premises (rather than a storage facility or laboratory) during the standstill must have their exterior cleaned and disinfected with a product labeled effective against FMD virus (https://www.aphis.usda.gov/animal_health/emergency_management/downloads/fmd-virus-disinfectants.pdf). Germplasm facilities designated as Infected, Suspect, or Contact Premises¹ during the standstill are subject to the quarantine orders (movement may not be allowed).

Clarifying this in the national movement standstill guidance in the USDA FMD Response Plan and/or policy guidance would provide business continuity opportunities for bovine germplasm facilities² that are not designated as Infected, Suspect, or Contact Premises; preserve genetic material; and lessen the burden to states with germplasm facilities that will inquire about movement options during an outbreak without increasing the risk of spreading FMD virus to livestock.

Infected Premises (IP): Premises where a presumptive positive case or confirmed positive case exists based on laboratory results, compatible clinical signs, FMD case definition, and international standards. Contact Premises (CP): Premises with susceptible animals that may have been exposed to FMD, either directly or indirectly, including but not limited to exposure to animals, animal products, fomites, or people from IP. Suspect Premises (SP): Premises under investigation due to the presence of susceptible animals reported to have clinical signs compatible with FMD. This is intended to be a short-term premises designation.
² Germplasm facilities are defined as those housing male or female donor animals that need to move one or more live animal(s), semen, or embryo(s) into or out of their facility. This includes semen production centers, embryo production centers, satellite collection centers, veterinary clinics, breeding facilities, and other livestock operations that are involved in the creation of bovine germplasm.
After the standstill lifts, germplasm movements out of, within, or into a Control Area will require a movement permit under the 2020 USDA FMD Response Plan guidance. If germplasm is allowed to be moved to non-livestock locations during the standstill, no movement permit should be required after the standstill lifts as long as the origin is not designated as an Infected, Suspect, or Contact Premises, and records are kept of collection dates and movements from origin to destination for traceability. Separating/segregating germplasm at its destination would be in the business’ best interest for germplasm collected/created after an outbreak in the event the donor is incubating FMD.

Lastly, it should be noted that USDA follows the World Organization for Animal Health (WOAH) Terrestrial Animal Health Code (TAHC) guidance which defines the FMD incubation period as 14 days. Two times the incubation period (28 days) is recommended for traceability, movement restrictions, and surveillance testing criteria.

Frozen bovine semen, in vivo-derived and in vitro-produced bovine embryos that were collected/created more than 28 days prior to the first US FMD diagnosis are a negligible risk for spreading FMD and should not be part of the national movement standstill. They may be stored frozen in laboratories without livestock and privately held tanks with and without livestock throughout the US.

RESOLUTION:

The United States Animal Health Association urges the United States Department of Agriculture to exempt the following bovine germplasm products from a national movement standstill issued due to a foot-and-mouth disease (FMD) diagnosis in the United States (US):

- Frozen bovine semen and frozen in vivo-derived and in vitro-produced bovine embryos collected/created more than 28 days prior to the first US FMD diagnosis as long as there are records to document the collection date and the origin is not an Infected, Suspect or Contact Premises.
- Semen, embryos, and oocytes collected from live donor animals during the standstill can move to a laboratory or storage facility without livestock as long as the movement is recorded and the origin is not an Infected, Suspect or Contact Premises.

Prior to leaving livestock facilities, semen and embryo storage tanks must have their exterior cleaned and disinfected with an Environmental Protection Agency-registered product labeled effective against FMD virus.

Movements to livestock facilities of frozen bovine semen and in vitro-produced bovine embryos collected/created less than 28 days prior to the first US FMD diagnosis will be subject to the movement restrictions determined by responsible regulatory officials based on the unique characteristics of the outbreak.