Foreign Animal Disease Guidance #3: Foreign Animal Disease Investigation

Section 1: Overview

Any swine or cattle having vesicular or unusual lesions are suspects of foreign animal diseases (FAD). Vesicular lesions are fluid-filled pouches (e.g., a cyst) that can rupture and leave open wounds, similar to a blister. These vesicles are symptoms of foot-and-mouth disease, swine vesicular disease, and vesicular stomatitis, where they form in and around the nose and mouth and around the hooves of cattle, sheep, and pigs. Additionally, other foreign animal diseases such as African Swine Fever or Classical Swine Fever do not produce vesicles, but result in high morbidity and mortality rates in domestic animals.

Beef, pork, and lamb slaughter establishments are unique in FAD detection, as they will operate under the regulations of two governmental bodies, the Food Safety and Inspection Service (FSIS) and the Animal and Plant Health Inspection Services (APHIS), if a foreign animal disease is detected. Additionally, State Animal Health Officials (SAHO) have jurisdiction in their state in the event of an outbreak, and will work with APHIS to facilitate response activities. The establishment must work cooperatively with all regulatory agencies to ensure that all necessary steps are taken in the detection and diagnosis of a FAD, and the subsequent steps required to continue normal business operations after test results are acquired.

This guidance document will aid beef, pork, and lamb slaughter establishments on the proper routes to follow if symptoms of foreign animal disease are detected in live or deceased animals at the establishment.

Section 2: Steps to Take During a Foreign Animal Disease Investigations

Clinical signs of foreign animal diseases can be detected by establishment employees and/or FSIS inspection personnel. Establishment employees who handle live animals or heads and hooves of deceased animals can be trained to detect signs of foreign animal diseases using the NAMI Guidance Document on Clinical Signs of FAD. FSIS veterinarians and inspection personnel are also trained to detect signs of foreign animal diseases, and are required to look for such signs as part of their inspection duties.
These steps outline the foreign animal disease sampling process that should occur if clinical signs are detected in live or deceased animals at a slaughter facility:

Step 1: If clinical signs of a foreign animal disease are detected by an establishment employee, the employee should notify establishment management immediately and if clinical signs are confirmed, management should immediately notify the FSIS public health veterinarian (PHV). If clinical signs are observed by FSIS personnel, the PHV and establishment management should be notified immediately.¹

Step 2: The animals displaying clinical signs should be separated from animals not showing clinical signs. The entire lot may be held for sample collection (see Section 3 for further description of holding animals and product).

Step 3: The PHV will notify the FSIS District Office as soon as possible. The PHV should be able to provide, at minimum, the origin of the affected lot, the time of detection, the severity of the lesions, and the number of animals in the lot. The District Office will then contact APHIS and the State Animal Health Official (State Veterinarian).²

Step 4: Specific to beef operations, the truck carriers that delivered the symptomatic lot of cattle should be contacted by the plant and notified that their trucks are involved in a current APHIS investigation and should hold their trucks. Their current locations should be identified and these trucks should be on hold until contacted by USDA or APHIS.

Step 5: The District Office will notify the APHIS Assistant Director, the State Animal Health Official (usually the State Veterinarian), or both, and provide the information gathered by the PHV.³

Step 6: The State Animal Health Official or the Assistant Director will determine how the case should be handled. If an investigation is warranted, a Foreign Animal Disease Diagnostician (FADD) will be sent to the establishment to investigate. FADDS should conduct a site visit within 24 hours, but experience shows that most visit within a few hours of the finding.

² Id.
³ Id.
Step 7: The plant should notify their procurement, quality control, and other appropriate teams to help gather information on the lot’s history. Such information should include:

- Premise ID number
- Production facility of origin
  - Name, address, and phone number of production facility
- Species of animals involved
- Number of animals in the lot
- Identification of drivers/trucks delivering the lot to the establishment
- Time of arrival at the plant
- Time at which the trucks carrying the affected animals left the establishment
- Information on other lots from the same live animal production facility arriving at the establishment
- Antemortem pen cards
- Clinical signs present/gross lesions
- Any history of the animals showing clinical signs
- The last 30 days of records for live animal movement to the establishment

The establishment should also notify the dealer and suspend further shipments from the site until all test results are negative, or the disease is determined a non-foreign animal disease.4

Step 8: When the FADD arrives at the establishment, he/she will gather the information collected (above), and collect samples from the affected animals.5 Samples may include:

- Epithelial (skin) tissue or fluid
- Oral (mouth) swab
- Blood for serum

Step 9: The FADD will send samples to a National Animal Health Laboratory for preliminary testing. Samples will also be sent to the National Animal Health Laboratory for preliminary testing. Samples will also be sent to the National

---

4 Id.
Veterinary Services Laboratory’s Foreign Animal Disease Diagnostic Laboratory at Plum Island, NY for confirmation of test results.6

Step 10: Results of testing7

▪ Negative: All animals are released for routine slaughter, and the production facility of origin may ship animals as normal.

▪ Negative for an FAD, but positive for a domestic disease (such as SVV): animals at the establishment are released for slaughter after passing FSIS antemortem inspection, animals at the originating live animal producer facility are held until all symptoms of the disease are gone.*

*If official lab results have been communicated to FSIS personnel assigned to the official establishment and acute signs are no longer observable in livestock at the live animal producer facility, that live animal producer facility can resume sending livestock for harvest (however, this is subject to FADD observations).8

▪ Positive: FAD Incident Command (APHIS) will take over. Corporate should be notified, and should follow the direction of APHIS personnel.

Section 3: Holding of Animals and Product During an Initial FAD Investigation

When clinical signs of a foreign animal disease are detected in animals at an establishment, the animal(s) displaying clinical signs will be identified as U.S. Suspects by FSIS. If the clinical signs are detected on the processing line, the carcasses will be retained by FSIS, pending testing.9

---

6 Id.
7 Id.
If this is the first time an establishment has held animals with clinical signs of a FAD, it is likely that all animals in the same lot as the FAD suspects will be located and held for further testing. This includes all same lot product previously harvested prior to clinical sign detection.

The detection of clinical signs of FAD may result in the complete shut-down of a slaughter establishment until negative preliminary test results are obtained. While none of the diseases discussed in this guidance document pose a risk to human health or food safety, the product from these animals may be held due to biosecurity concerns, and APHIS and FSIS will make the final decision about when and how the product is released. The establishment should cooperate with APHIS and FSIS officials to make sure all necessary biosecurity and containment procedures are followed so that as soon as negative test results are obtained, business can continue as usual.\textsuperscript{10}

Section 4: Conclusion

This guidance document will aid beef, pork, and lamb slaughter establishments on the proper routes to follow if symptoms of foreign animal disease are detected in live or deceased animals at the establishment. If you have questions or concerns about this document or anything else regarding foreign animal disease, please contact Tiffany Lee at 202-587-4248, or tlee@meatinstitute.org.

---

\textsuperscript{10} In pigs, because of previous experience with Seneca Valley Virus (SVV), slaughter of non-diseased animals and movement of product is based upon epidemiologic data, and may continue in plants where SVV has been detected previously. Seneca Valley Virus is a domestic disease in which pigs display clinical signs similar to foot-and-mouth disease (vesicles, drooling, lesions on the mouth and feet). Continuity of business (continuation of slaughter, movement of product) depends on epidemiologic data provided to APHIS by producers and slaughter facilities in the affected area.
Section 4: Investigation Flow Chart

Clinical signs detected by establishment employee

Clinical signs detected by FSIS inspector

FSIS PHV and an establishment supervisor are notified of suspect animals, animals and lot are held for further testing

PHV contacts state animal health official (APHIS and State Veterinarian)

FADD sent to establishment

Establishment supervisor notifies procurement, QC, and other appropriate staff

Gather information on animals and their history for FADD

FADD arrives, collects information and samples

Samples sent to nearest NAHLN lab and FADDL (Plum Island)

Negative for FAD
- Continue normal operations

Negative for FAD, positive for a domestic disease
- Release animals at plant for harvest, hold animals at farm until symptoms are gone

Positive for FAD
- Notify corporate, work with FAD Incident Command