Active Observational Surveillance (AOS) to Support Permitting Milk Movement as Part of the Secure Milk Supply (SMS) Business Continuity Plan during an FMD Outbreak

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Introduction
One goal of the Secure Milk Supply Business Continuity Plan is minimizing interruptions in raw milk movement from dairy farms (with no evidence of FMD infection) in a FMD Control Area to commercial processing. In order to continue to move milk, dairy farms (and milk haulers and processors) in an FMD Control Area will need to meet specific biosecurity performance standards designed to minimize the potential for FMD virus to be introduced to or spread from the dairy herd. In addition, dairies in an FMD Control Area will need to implement a formalized process for daily herd inspection, or “Active Observational Surveillance” (AOS) to document that there is no evidence of FMD virus infection in their herd. The goal of AOS is the earliest possible detection of FMD. With AOS successfully in place during an FMD outbreak, there is increased confidence that dairies moving milk to processing are free from FMD. **Active Observational Surveillance does not replace the need for periodic inspection of the herd by animal health officials. Rather, it supplements this process by requiring daily observation by trained Herd Health Monitors on each dairy to increase the likelihood of early FMD detection.**

This DRAFT document outlines a proposed approach to Active Observational Surveillance. In addition to AOS and regular inspections by animal health officials, dairy herds in an FMD control area may undergo periodic laboratory testing as defined and implemented by the Disease Surveillance Branch of the specific incident.
Active Observational Surveillance for the Secure Milk Supply Plan

Active Observational Surveillance (AOS) is defined for the purposes of the Secure Milk Supply Plan as:

> an active process for the detection of foot-and-mouth disease on dairy premises, utilizing trained observers (herd managers or workers) who are routinely monitoring animals on a daily basis for abnormal or increased occurrence of clinical signs compatible with FMD, or changes in food or water consumption, or in milk production.

Observation of clinical signs consistent with FMD should trigger reporting the observation to the Incident Command; likely resulting in further investigation, and perhaps lab-based testing.
Who will be responsible for AOS?
An individual (or individuals) must be designated as being responsible for overseeing AOS on the dairy. On smaller dairies, the HHM for all animals on the premises will likely be the owner of the dairy. On larger dairies, various individuals may be responsible for AOS for different groups of animals on the same premises. Those designated will serve as the official on-duty Herd Health Monitor (HHM) for that specific group of animals on the premises. A small group of 2 or 3 individuals may be trained and qualified to serve as the HHM for specific groups of animals on each premise. When one HHM goes off duty, they must communicate with the HHM coming on duty to brief them on the herd health situation, particularly observation of any clinical signs of concern. The designated HHMs should have a history of consistent daily involvement with the herd for at least several months so that they are familiar with the herd and any normal health problems. The HHMs are likely to be the same people who are responsible for monitoring animal health daily in the absence of an FMD outbreak for any health problems which may require diagnosis and treatment.

Signs of FMD
The classical signs of full-blown FMD in cattle include painful sores and blisters in the mouth, on the feet, and on the teats of animals that quickly rupture into ulcers. Examples of these blisters and sores can be seen on the Foot and Mouth Disease Pocket Guide for Cattle and the Foot and Mouth Disease Wall Chart for Cattle which are part of the training materials for HHMs. If these sores are seen, it means that the FMD virus has been present in the herd for a few days and it is urgent to request that an animal health official inspect the herd. In order to control the spread of FMD virus within the herd and between herds, it is very important that infection in the herd be detected as early as possible. Animal health officials are trained in early detection of FMD and can collect appropriate samples to submit for laboratory testing to detect the virus if present.

Many of the clinical signs associated with early stages of FMD infection (fever, lameness, mastitis, slobbering, diarrhea, off-feed, depressed, etc.) are expected to occur with a certain frequency in a herd due to a variety of other causes. The designated HHM must be capable of deciding when the occurrence of suspicious clinical signs has an unexplained higher incidence than “normal” and requesting a herd exam by an animal health official.

Early Clinical Signs of FMD:
- Off feed
- Excessive salivation, drooling or lip-smacking
- Dullness, depression, reluctance to move
- Lameness: Reluctance to rise, or stamping or shaking of the feet
- Fever: Spikes typically between 104°F and 106°F and lasts 2-3 days
- Runny nose
- Diarrhea
- Mastitis
- Shivering
- Calf deaths
- Abortions
- Decreased milk yield
FMD Monitoring Documents

Included in the HHM training materials are

- **AOS HHM Training Documentation Form**
  - Purpose: Provides written documentation of training for personnel designated as HHM(s) for a specific farm.

- **AOS Daily Observation Worksheet**
  - Purpose: Provides written documentation that all cattle on a farm have been observed daily by a trained HHM for clinical signs of FMD.

- **AOS Daily Observation Worksheet-Comment Form (optional)**
  - Purpose: Allows the HHM to supplement the Daily Observation Worksheet by providing additional details regarding concerns or clinical signs of FMD noted, if desired.

- **AOS Herd Health Record Form (optional)**
  - Purpose: Provides an optional method for the HHM to record observations and treatments associated with potential clinical signs of FMD.

The HHM should follow the guidelines below for proper implementation of AOS:

- Monitor animals and document observations at least once daily by filling out the AOS Daily Observation Worksheet as completely as possible.
- Animals are best observed when they are active. Suggested observation times include
  - At milking (lactating cows) or while walking to the milk parlor;
  - At feeding;
  - When pushing up feed;
  - At breeding;
  - During herd checks;
  - During heat checks; and
  - When moving animals between pens.
- The best observation will occur upon close interaction with the animals when you can observe individual animals. In addition, observation of animals in uncrowded areas will result in better FMD monitoring.
- The HHM should be prepared to restrain the animal in a safe and humane manner for further examination as necessary.
- Be familiar with the AOS Worksheets and be prepared to complete them, along with recording health data on individual animals showing suspicious clinical signs, if your dairy herd is near an FMD outbreak area.

**Completing the Daily Observation Worksheet**

A HHM will be expected to complete a daily observation worksheet for each group of animals on the dairy. Each worksheet should be labeled with the appropriate pen or group ID. The listed pen or group ID should be easily identified by other HHMs, managers, veterinarians, workers, etc. on the premises. The HHM will need to check one of the three possible columns:
1. No early clinical signs associated with FMD were observed beyond what is considered normal for this group.
2. Early clinical signs associated with FMD beyond the normal range for this group were observed. The HHM Supervisor, herd veterinarian, or animal health authorities have been notified to inspect the animals.
3. Blisters or sores were noted on the mouth, feet, or teats. The HHM Supervisor, herd veterinarian, or animal health authorities have been notified.

If number 2 or 3 is checked, the HHM should be prepared to provide details of the clinical signs observed to the animal health authorities when they notify them. The animal health authorities will be responsible for making the decision as to whether milk movement should continue while awaiting inspection.

The HHM will need to sign the worksheet each day and is encouraged to provide additional comments related to their observations on the associated Comment Forms. The HHM should also record health information on individual animals which show clinical signs of FMD either on the AOS Herd Health Record Form or in the animal health record system normally used on that dairy. All records related to AOS must be available for inspection by animal health authorities managing the FMD outbreak.

**How will the HHMs be trained?**

A packet of training materials for the HHMs will be developed in English and Spanish. This will include visual aids for recognizing clinical signs of FMD, instructions on how to conduct AOS, and specific guidelines on who to contact if unusual clinical signs are observed. Training, including a packet of training materials, will be delivered by an individual under the authority of a State or Federal Animal Health Official and explained to the designated HHMs. The HHMs will be expected to read and understand the material in the training packet. The date of the training, identity of the trainer, and individuals trained as HHMs will be documented. The HHM will be responsible for communicating to all workers on the premises to be alert for the clinical signs associated with FMD and to report them immediately to the HHM on duty.

To allow timely milk movement with AOS, HHMs will need to be selected, trained, and this training documented with state animal health officials in advance of an outbreak of FMD.

Comments are still being accepted on this draft document. Please email your comments, questions, input to smsinfo@iastate.edu.