Secure Milk Supply: Current Challenges and Industry Opportunities
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FAD Response Planning is Moving in a New Direction

All aboard!!!
Secure Milk Supply Plan

- Dairy Industry **Continuity of Business Planning** for FADs
- **Initial Goal**
  - To maintain milk movement from dairy farms with no evidence of infection in a Foot-and-Mouth Disease (FMD) outbreak and to provide a continuous supply of wholesome milk and milk products for consumers
- **Partnership**
  - Industry, State, Federal, Academia
- **Voluntary**

**SMS Partners**

**National Partners**
- **Industry**
  - Working groups, topic experts
- **Academia**
  - Iowa State University
  - University of California, Davis
  - University of Minnesota
- **USDA-APHIS-VS**
  - National Center for Animal Health Emergency Management (NCAHEM)
  - Centers for Epidemiology and Animal Health (CEAH)

**Regional Partners**
- **California**
- **Colorado**
- **New England States Animal Agricultural Security Alliance (NESAASA)**
  - CT, MA, ME, NH, RI, VT
- **Mid-Atlantic States**
  - VA, MD, TN, NC, SC, DE, WV, NJ, PA
- **Michigan**
- **Pacific Northwest**
  - WA, OR
- **Wisconsin**

Quarterly partner calls facilitate coordination, collaboration and information sharing.
Joining Forces = Progress

• Industry – State – Federal – Academia
• Working towards a common goal
  – Continuity of Business for Dairy Industry
• Accomplishments
  – Biosecurity recommendations
  – Citric acid exemption
  – Baseline risk assessment
  – Herd health monitoring
  – Draft recommendations

Estimated costs of an FMD outbreak in the US

• The delay in diagnosis of an index case of FMDv in a CA dairy is estimated at $565 M/hr, or 13.6 B/day \(^{(1)}\)

We must plan and be prepared to respond in new ways.

“US livestock industries have changed dramatically since 1929.”

If we get FMD, we likely will be dealing with it for a long time ...

The path ahead ... remaining challenges

• Managing large/long outbreaks
  – “Acceptable” options for milk from infected farms (3/19/14 webinar)
  – Calf rearing, feed, manure mgt, cropping etc.
• Pre-certification process
• Information management and timely, scalable permitting
• Mitigation of risk to rapidly growing dairy export market
• Continued outreach and education

FMD Detection in the United States:
Types of an FMD Outbreak

Six Types of FMD Outbreaks

Response Shifts from Emphasis on Stamping-Out to Emphasis on Alternate Strategies (duration of FMD response)
Managing a Large/Regional – Catastrophic Outbreak

- Widespread areas of infection involving a large portion of the United States
- Too many animals are affected to implement complete stamping out
- Apparent that FMD is widespread, and will not be eradicated within a year
- Sufficient vaccine may or may not be available to effectively control the outbreak
- Transition from an emergency eradication response to a long term control program eventually leading to eradication, perhaps including vaccinate-to-live

Recent National SMS White Paper Dialogue

“Milk Handling from FMD Infected, Suspect, or Contact Dairies During an Extensive FMD Outbreak When These Premises are not Depopulated”
Purpose of White Paper Development

- Audience = industry and government
- Pre-event discussion, dialogue and ideally consensus on approach
- FMD outbreak responses require timely decision making
- Enables more functional preparedness
- If consensus reached, greater likelihood industry and government can message with one voice
- Best positions industry for COB while assuring disease control

Potential uses for large volumes of normal milk from known infected dairy herds in large outbreaks

- Dispose of milk – inconsistent with COB
  - On or off farm?
  - Needed capacity over time in prolonged outbreaks?
- Process milk
  - Normal processing into normal commerce
  - Normal processing into non-fluid milk products
  - Extra heat and/or lower pH
- End consumer if milk processed?
  - Human
  - Animal
US PHS/FDA Grade A PMO Assures Milk/Milk Products are Safe for Human Consumption

- Sets standards and inspection processes for production of dairy products from Grade A milk
- Describes policies and procedures to assure milk and milk products are safe for consumers
- Defines “abnormal” milk as that which must be discarded
- 2013 revision recently available


Summary of Comments Received

- Comments received from six groups (NMPF, US DEC, AABP, CDFA, MI SMS, U of MN RA team) and 10 individuals
- “General” agreement with the white paper concept and recommendations
  - No strong opposition or suggested alternatives to date
- Comment period closed March 27th
- Updated document will be re-circulated for final comments in next few weeks
General Types of Comments or Questions Received

• Language or verbiage
• Required biosecurity for milk transport to processing not clear
• Specific milk decontamination and disposal procedures not provided
• End use of milk from known infected farms
• Consumer perception concerns
• Language on milk from FMD vaccinated cattle

Pre-Certification Process Concept Example – CA SMS

• Enables eligibility for permitting
• Staged approach
• Requires education, training and demonstration of some skills
• Requires inspections/reviews
• Documentation and maintenance of entity status
Dairies, Haulers and Milk Processors will all need to be certified for a milk movement permit to be issued.

CA Pilot Program for Producers

- Using CA DQAP model
- 3 hour training with ~20 producers
- Binder, templates and materials provided
- Topics: HMD the basics, global lessons learned, videos
- CA FMD response plan
- How to build your plan....ABC’s of HMD response planning
- 2015 goal is to train producers shipping to 3 CA processors
Proposed CA SMS pre-certification levels

- Gold
- Silver
- Bronze

Gold certified producer-hauler-processor routes would have no interruption in milk movement if biosecurity and herd monitoring in place.

Protecting your castle...
Protecting your cows...
Protecting the dairy industry
A SMS- HMD Emergency Response Plan

A Perimeter Bio-security

B Cleaning & Disinfection

C Herd Monitoring for Disease

Creating a HMD Emergency Response Plan for your dairy...

Hoof & Mouth Disease
Emergency Response Plan

Dairy Facility Name

During an outbreak of Hoof and Mouth Disease (HMD), local or state-wide quarantine and restrictions on the movement of animals and animal products, like milk, may be ordered. Such restrictions may prohibit movement of the farm and products, like milk. Once implemented, the following plan represents procedures that dairy farmers may be permitted to transport milk to commercial processing, even during a quarantine. The following plan is the result of the dairy will implement during such an event.
Protecting your cows...
Protecting the dairy industry

Failing to prepare, is preparing to fail...

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**Dairy Partners in Hoof and Mouth Disease Emergency Planning**

Name and emergency phone of the dairy HMD emergency manager: ____________________________

Name and emergency phone of the processor field representative: ____________________________

Name and emergency phone of the dairy inspector: ____________________________

Herd veterinarian name & phone: ____________________________

Name and emergency phone of companies’ raising helpers off-site: ____________________________
Perimeter Bio-security – Identifying items on your map...

1. A facility map is attached indicating:
   a) Perimeters of the property and animal housing areas
   b) All road-side entry points
   c) Location of entry points & other access areas that will be secured/ blocked (locks, hay bales, etc.)
   d) Potential fence-line contact points with animals from other farms
   e) Site of cleaning & disinfection (C&D) station(s)
   f) Path the milk tanker will travel on the facility
   g) Site of employee parking & changing station

California SMS- HMD Map Legend

- Public road
- Dairy perimeter
- Animal Housing perimeter
- Milk truck route to parlor
  - Entry points
- Temporary barrier to vehicle traffic
- Fenceline contact with neighboring animals
  - Vehicle C&D Station
- Farm personnel Parking & Changing Station
- Milk Parlor
Securing Entry Points & Signage

2. Equipment or material is available to secure or block each entry point onto the farm (chains, locks, hay bales etc.). The only entry points not secured will be entry point(s) where the C&D stations are located.

3. Signage is available for secure/blockd entry points to direct traffic to the designated C&D entry point(s). Signage at the main entrance is available telling visitors to stop sound their horn and remain in their vehicles until approached by an employee.

Handling business-critical visitors

4. Deliveries & Visitors. All vehicles and persons entering the facility will be recorded in a visitor log. Delivery services (UPS, FedEx etc.) will stop outside the perimeter line, announce themselves by sounding a horn and wait for an employee to approach them to take delivery. All visitors will park outside the perimeter, announce themselves by sounding their horn and remain in their vehicles until approached by an employee. Visitors will wear disposable plastic shoe covers and be escorted to the appropriate area as necessary. Visitors requiring their vehicle will have the vehicle C&Ded and will be provided with clean coveralls and disposable plastic shoe covers.
5. **Employee Parking & Entry**: Employee parking is established outside the farm parameter. Employees will wear disposable plastic shoe covers and proceed to the designated changing area adjacent to the parlor. Employees wash their hands and change into clean coveralls and boots provided by the farm and which do not leave the farm.

![Designated employee parking area off-farm](image)

### Animal Care During Quarantine

6. **Animal Movement**: When an animal quarantine is ordered companies that raise replacements off-site will be contacted, halting pick-ups and deliveries until further notice. *Housing and care will be provided for all calves born on the farm, on-site until the quarantine is lifted.*

![Animal care during quarantine](image)
7. **Cleaning and Disinfection (C&D) Site(s)** will be established at the location(s) indicated on the facility map. All non-essential vehicles (including employees’ personal vehicles) will be parked outside the perimeter. Essential vehicles entering the facility, including milk tankers and feed trucks, will be cleaned of all visible dirt and then disinfected. The procedure to be used is detailed in the attached Vehicle Cleaning and Disinfection Standard Operating Procedure. Equipment and supplies that are stored on the farm for C&D are found in the attached equipment list.

8. **Visitor Log:** All vehicles and persons entering the facility will be recorded in a visitor log (as previously noted in Item 4 above).

9. **C&D & Milk Transfer Employee Training:** Employees who will perform vehicle C&D and/or milk transfer are trained annually. Records of annual training are available.

10. **Demonstrations/drills for vehicle cleaning & disinfection (including milk tankers) are performed annually.** Records of annual demonstration are available. This drill will demonstrate:
    a) all equipment is functional, particularly the pressure washer
    b) all visible dirt is removed from the vehicle and undercarriage
    c) any discharge or rinsings (used cleaning solution) does not leave the dairy, but stays in the vicinity of the C&D station and away from animals and animal areas.
11. Disease Recognition: Designated dairy employees are trained annually to recognize the symptoms of Hoof and Mouth Disease and who to contact if suspicious signs are seen. Records of annual training are available.

12. Herd Monitoring: During a response, the “designated” HMD Herd Health Monitor will be responsible for working with the milking and other staff to determine if any suspicious signs were seen. The results of these observations will be recorded daily on the HM log sheet and reported to the animal health officials as requested.

So....

What do you do when you get the call?
Acknowledgments

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Dairy Export Loss Mitigation Opportunities for Industry

• Ideal is to have specific language in OIE TAHC on products not impacted by an FMD outbreak
  – Lactose
  – Whey powder
  – Dry milk powder
  – Some cheeses

• This requires industry to be proactive

Export Loss Mitigation Opportunities for Industry

• U.S. Dairy Export Council funded initial review
• Review conducted by CFSPH, ISU
  – Fat droplets, casein micelles thought to help protect FMDv from inactivation
  – Fat, protein thought to protect FMDv from inactivation due to pH changes

www.securemilksupply.org
Under “FMD Info”
www.securemilksupply.org

- FMD Info
- Dairy Industry Manual
- Phases and Types
- Inactivation of FMDV in dairy products
- Vaccination info
- FMD Response Plan
- OIE resources

Thank you!