

The Importance of Building Business Continuity into Contingency Plans: The Example of FMD Continuity of Business Planning in the United States



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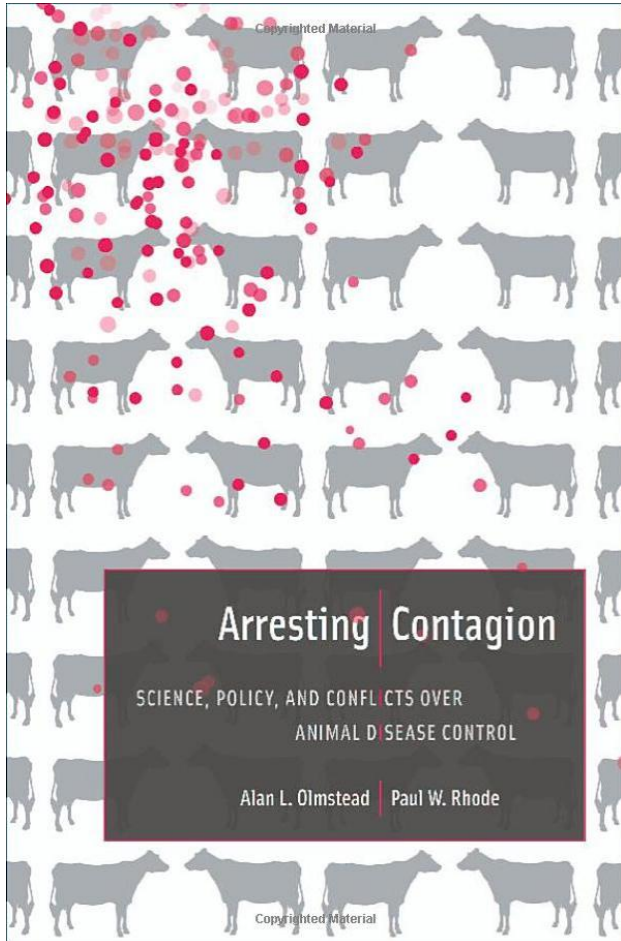
41st General Session of the European Commission for the
Control of Foot and Mouth Disease (EuFMD)

FAO Headquarters, Rome, Italy

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Historical VS Successes Created New Challenges



USDA Bureau of Animal Industry Successful Eradication Programs (1884-1943)

- Contagious Bovine Pleuropneumonia (1892)
- Fowl Plague (1929)
- Foot and Mouth Disease (1929)
- Glanders (1934)
- Bovine TB (1940)
- Dourine Fever (1942)
- Texas Fever (1943)

We must plan and be prepared to respond in new ways



REPORT SUSPECTED CASES
OF
FOOT-AND-MOUTH DISEASE

To the nearest Veterinarian
or Livestock Official

FOOT SYMPTOMS:
Blisters between toes
Lameness
Sloughing of hoof
Pain; animal lies down

**It's Intensely Infectious
and Easily Carried on:**
Hand, Shoes, Clothing
and many other ways

MOUTH SYMPTOMS:
Blisters on lips and tongue
Ropy saliva
Smacking of mouth
Pain when eating

OTHER SYMPTOMS:
Rapid loss of flesh
Reduced milk flow
Inflamed udder
Blisters on teats
Loss of appetite
Chills and fever
DEATH MAY FOLLOW

YOUR DUTY:
Confine sick animals
Stop all visiting
Tie dogs; pen fowls, etc.
Report case at once!

This pestilence of cattle, swine, sheep, etc., causes enormous losses, and must be suppressed at once!

Send for Farmers' Bulletin on "Foot-and-Mouth Disease"

United States
Department of Agriculture

“U.S. livestock industries have changed dramatically since 1929 ”

U.S. Foreign Animal Disease Response Planning is Moving in a New Direction

U.S. Secure Food Supply (SFS) Plans are underway !

All aboard!



Why Secure Food Supply (SFS) Plans?

Size, structure, efficiency, extensive movement inherent in North American livestock industries will present *unprecedented challenges* in an FAD outbreak



Goal of SFS Plans: Ensuring Business Continuity for U.S. Agriculture

- Minimize unintended negative effects of disease and disease response, while achieving response goals
 - Control or eradicate disease without “destroying” the industry



U.S. Secure Food Supply Plans under development

- Secure Milk Supply
 - Foot and Mouth Disease (FMD)
 - Movement of milk
- Secure Pork Supply
 - FMD, Classical Swine Fever, African Swine Fever, and Swine Vesicular Disease
 - Movement of animals
- Secure Beef Supply
 - FMD
 - Movement of animals
- Secure Egg Supply
 - High Path Avian Influenza (HPAI)
 - Eggs and egg products
- Secure Turkey Supply
 - HPAI
 - Movement of birds
- Secure Broiler Supply
 - HPAI
 - Movement of birds, hatching chicks and eggs



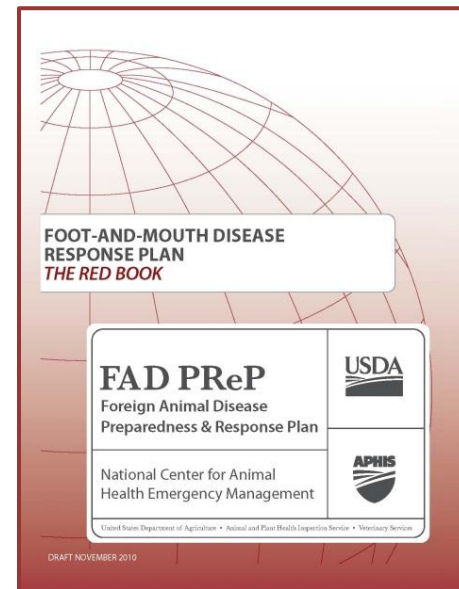
Common Components of Secure Food Supply Plans

- **Voluntary** pre-outbreak preparedness components
- **Biosecurity**, surveillance, epidemiology questionnaires, movement permits
- **Proactive risk assessments** (completed and in-process)
- Plans must be based on **current capabilities** and will evolve with science, risk assessments and new capabilities
- **Guidelines only**: Final decisions made by responsible officials during outbreak
- Outreach and training pre- and post-outbreak



U.S. FMD response is based on USDA VS guidance

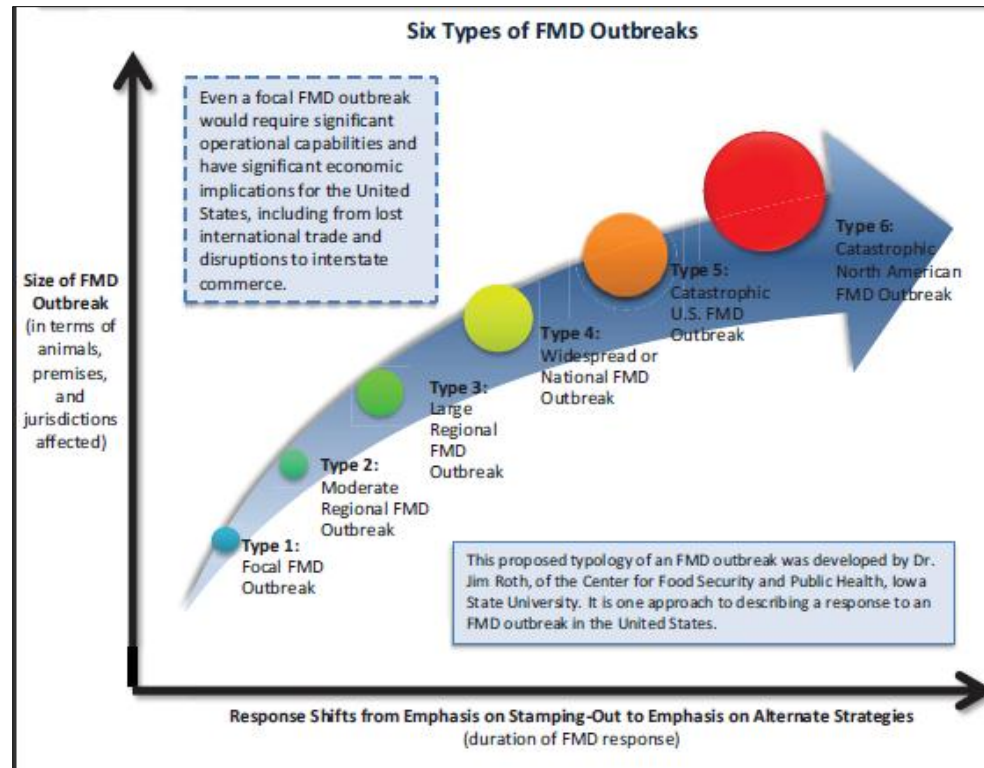
- Rapid control and eradication still the goal, but...
 - Animal/product movements from concentrated dairy, beef and swine sectors present a huge challenge
 - Mass depopulation unlikely - inadequate resources/political will
 - May take months/years to gain freedom from the disease
- Recent policy enhancements
 - Continuity of business planning
 - Early consideration of vaccination



Modern U.S. FMD response plans must be scalable to different size outbreaks

FMD response and management strategies depend upon outbreak:

- “The Type”, eg magnitude, location, other characteristics
- “Phase”, eg the stage



There are many tools for the control of FMD

- **Biosecurity**
- Quarantine and **Managed Movement**
- Trace back/Trace forward
 - 2 incubation periods
- Stamping Out
 - Slaughter of all clinically affected and in-contact susceptible animals (within 24 hours or as soon as possible)
- Surveillance
- Rapid Diagnostics
- Vaccination
 - Vaccinate to kill/slaughter/live



The U.S. National Secure Milk Supply Plan



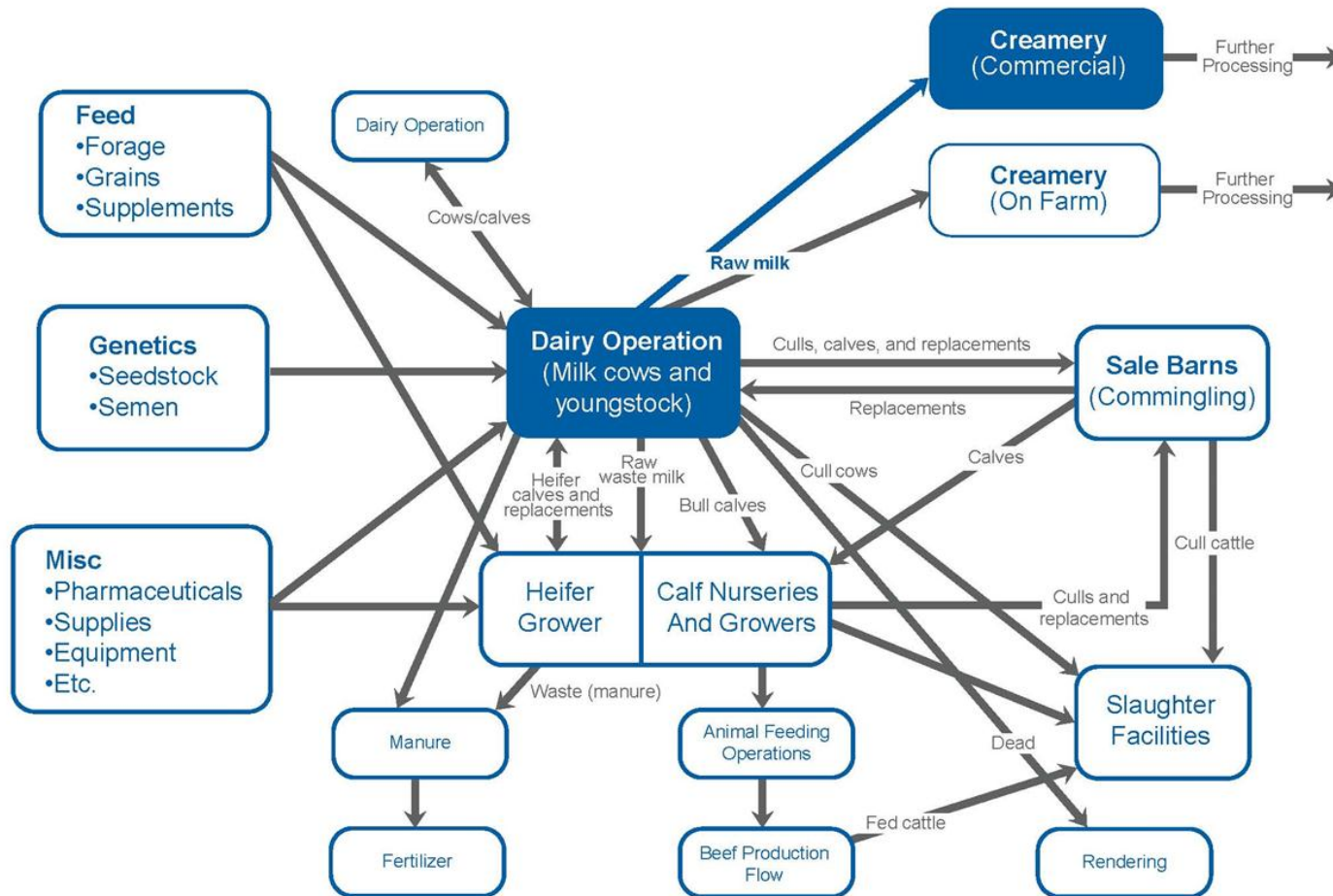
What is the Secure Milk Supply Plan ?

- U.S. Dairy Industry **Continuity of Business Planning** for FMD
- **Initial Goal**
 - To **maintain** milk movement in a Foot-and-Mouth Disease (FMD) outbreak and to provide a continuous supply of wholesome milk and milk products for consumers
- **Public-Private Partnership**
 - Industry, State, Federal, Academia
- **Voluntary**



National SMS Initial Focus: Raw Milk Movement from Farm to Processing

The dairy industry (producer and processor) business flow is complex



National and Regional SMS Partners

National Partners:

Industry

- Working groups, topic experts

Academia

- Iowa State University
- University of California, Davis
- University of Minnesota

USDA-APHIS-VS

- National Preparedness and Incident Coordination (NPIC)

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

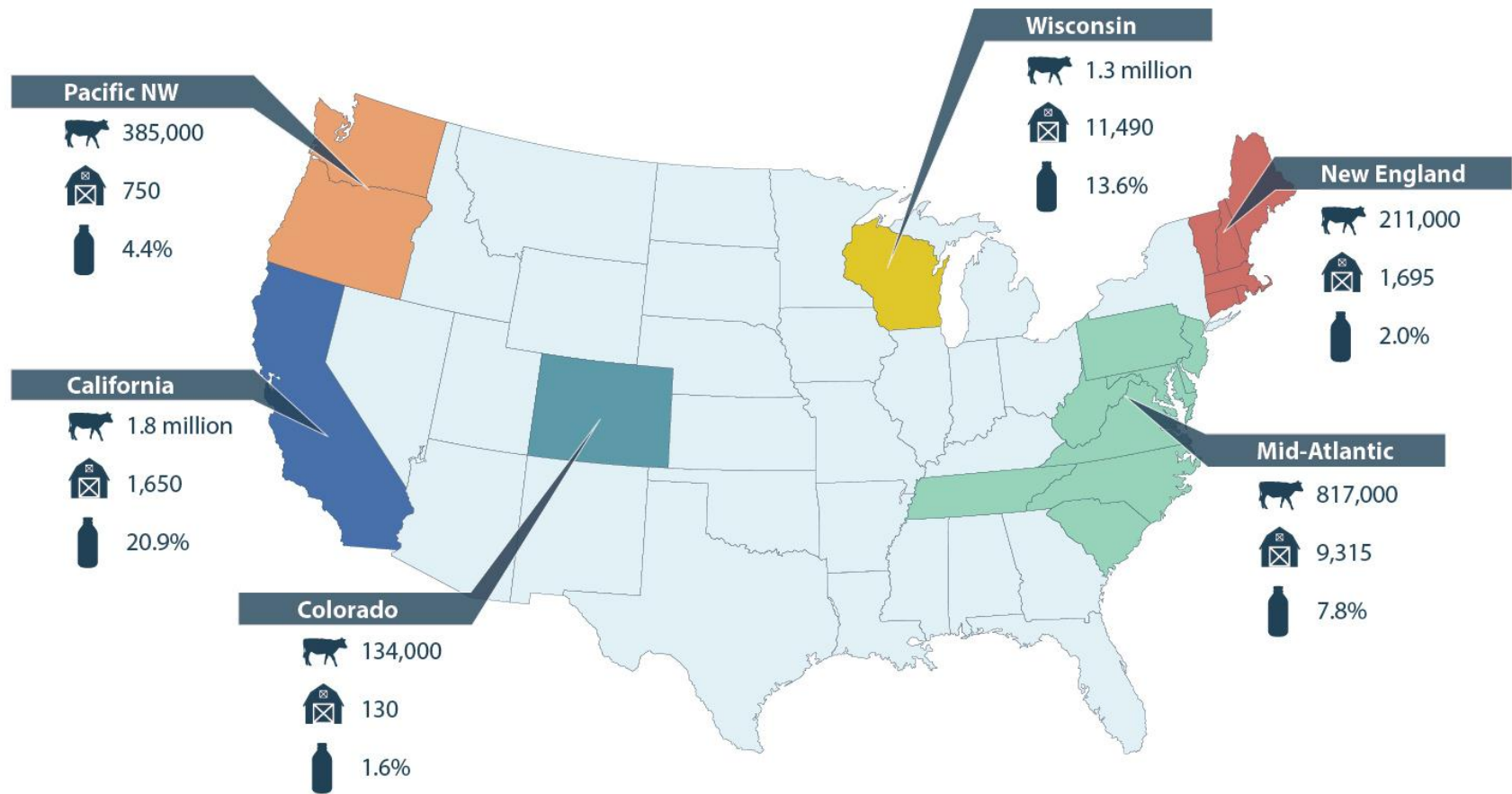


The SMS must accommodate the diversity of the US dairy industry

State	Total Milk (million lbs)	Milk Cows (1,000)	# Farms	% US Milk Production
California	41,256	1,780	1,515	20.5
Wisconsin	27,572	1,271	10,860	13.7
New York	13,469	610	5,030	6.69
Idaho	13,431	573	550	6.67
Pennsylvania	10,565	533	7,200	5.25

Top 5 U.S. dairy states, 2013

Diversity of Milk Production Among SMS Regional Partners, 2012



Legend

- Total number of milk cows
- Total number of farms
- % total U.S. milk production

Sources:

- USDA Economic Research Service, Milk cows and production by State and region (2012), April 30, 2013 available at: <http://www.ers.usda.gov/data-products/dairy-data.aspx>
- Hoard's Dairyman, Table 3. Dairy farm numbers by state and region, 2012; March 13, 2013, p. 151 (Data from USDA NASS)

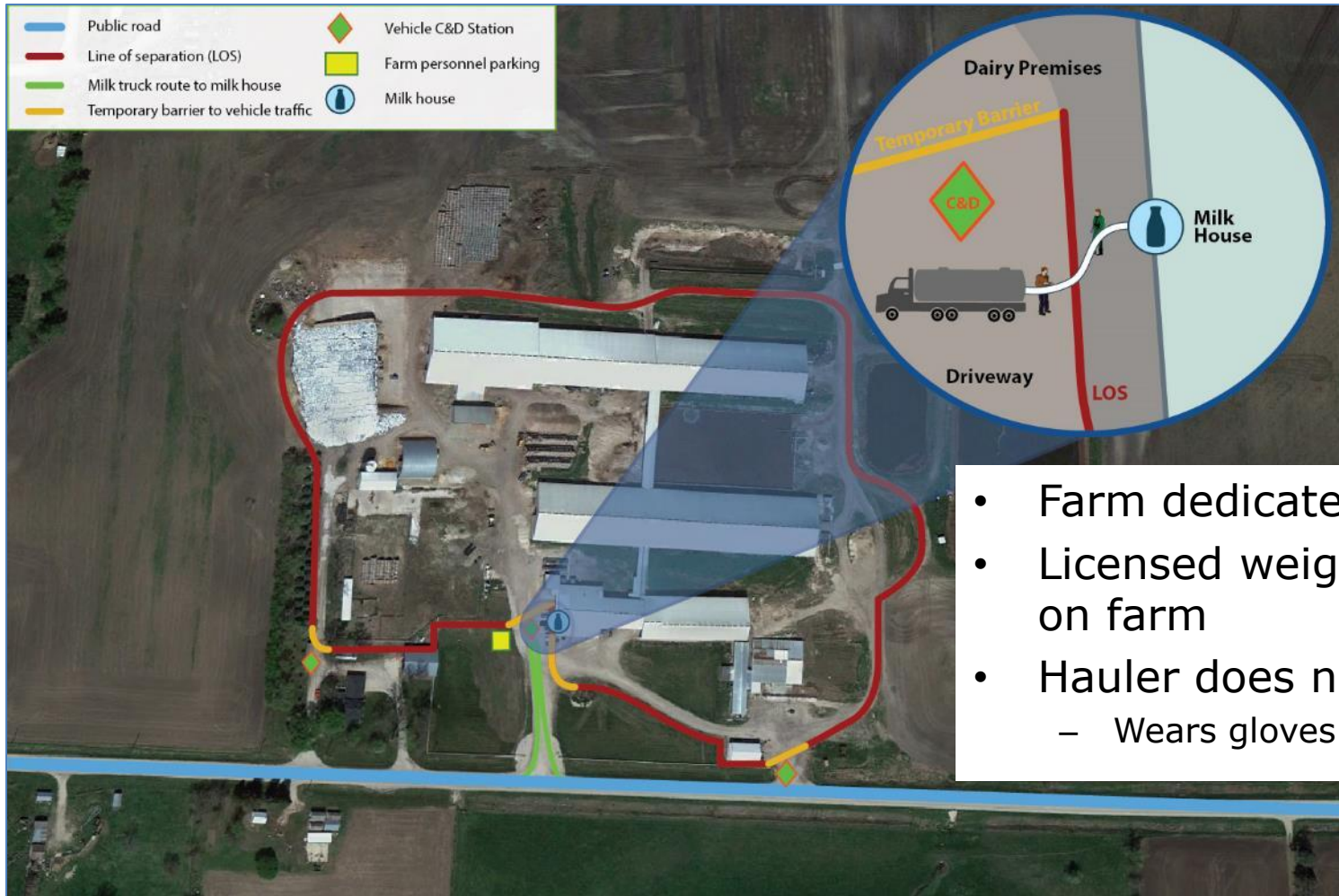
Core SMS Plan Components

- Biosecurity performance standards
 - Dairy premises, milk haulers, processing plants
- Pre-event risk assessments
 - Identify needed mitigation steps to control FMD virus spread
- Decision support and training tools
 - Guidance documents
 - Herd monitoring/surveillance tools
 - Handling of milk from FMD infected farms
 - Surge capacity for FMD vaccination



Line of Separation (LOS)

(Milk tanker does not cross in this example)



California's SMS pre-certification levels for producers

DRAFT CONCEPT OF CALIFORNIA SECURE MILK SUPPLY CERTIFICATION LEVELS

CA SMS Certification Level	Bronze	Silver	Gold - Certified
Workshop Attendance	Recommended	Recommended	Recommended
SMS Farm Plan Completed and Current*	Yes	Plan reviewed and approved by CDFA	Plan reviewed and approved by CDFA
SMS Supplies	No supplies	All required supplies	All required supplies
Documented Employee Training <ul style="list-style-type: none"> • Herd Monitoring • Cleaning and Disinfection/PPE • Bulk tank sample collection and milk transfer 	No training	Completed	Completed
Demonstration Exercise of Plan Component <ul style="list-style-type: none"> • Herd Monitoring • Cleaning and Disinfection/PPE • Bulk tank sample collection and milk transfer 	No demonstration	Some plan components successfully demonstrated	All plan components successfully demonstrated

- **Gold**
- **Silver**
- **Bronze**



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



Dairies, Haulers and Milk Processors will all need to be GOLD certified for a milk movement permit to be issued in an outbreak

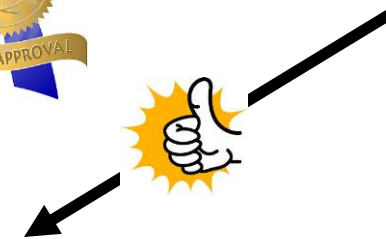
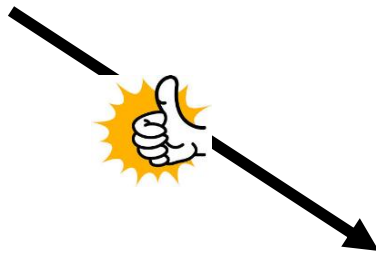
Dairy Farm



Milk Hauler



Milk Processor



Milk Movement Permit



Verified and activated



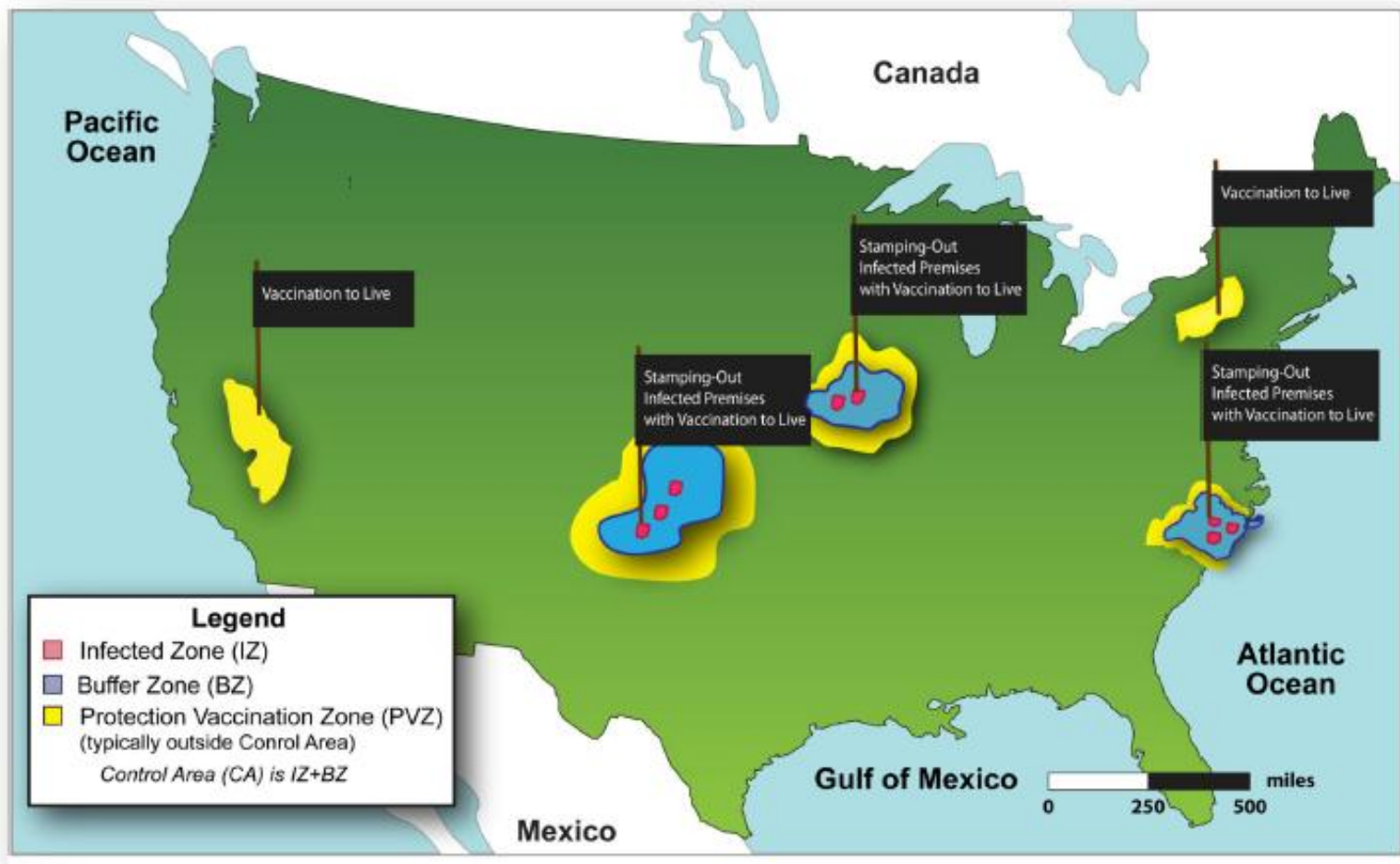
Messaging will be critical to maintaining U.S. consumer confidence

- FMD is NOT a public health concern
 - **NOT** hand-foot-mouth disease that affects children
 - **NOT** the same as BSE or “mad cow disease”
- Industry has invested heavily on crisis communications preparedness www.FootAndMouthDiseaseInfo.org
- Industry representatives suggest using term “HOOF and Mouth Disease” in messaging



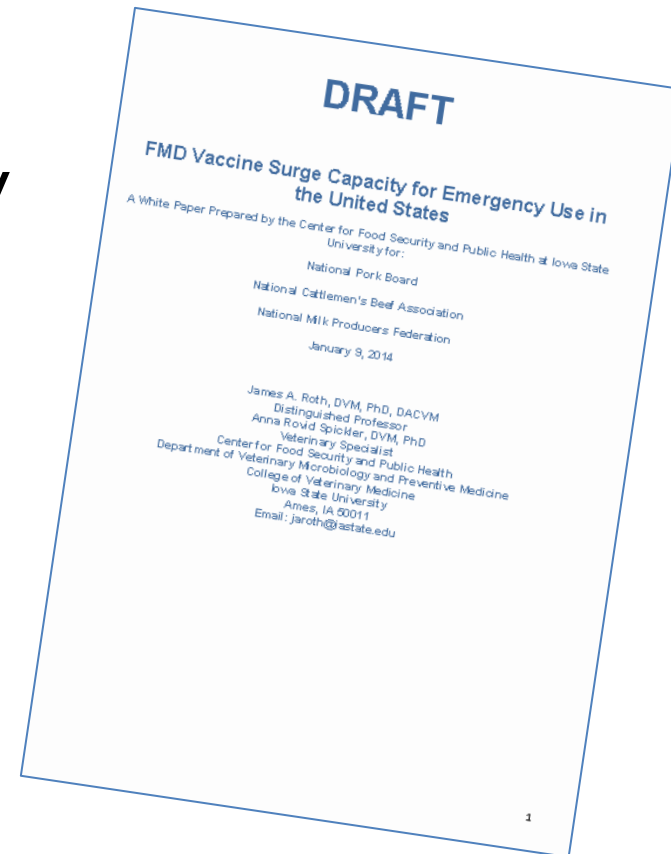
U.S. FMD vaccination contingency planning...One size does not fit all

FMD Outbreak Type 3: Large Regional FMD Outbreak



FMD Vaccine Surge Capacity for Emergency Use in the United States - January 2014

- At present vaccine availability is highly unlikely to meet desired demands
- Contingency planning should take limited vaccine resources into consideration
- Prioritization for limited resources should be discussed in advance with all stakeholders



SMS Current Focus: Management Issues in a Large FMD Outbreak

- On-farm calf rearing and management of replacement heifers
- Enabling other necessary activities (cropping, manure handling, feed, etc.)
- Milk handling from FMD infected or vaccinated dairies
- Dairy export loss mitigation opportunities for industry



Conclusions

- COB planning is presently a necessary component of FMD emergency response planning
- COB planning is not something that VS can do on its own and it must engage and involve all stakeholders
- While planning guidance is necessary, COB plans must still be tailored to local, regional and state needs
- To be successful, COB planning and preparedness must occur and be well socialized in advance of an event
- There is inherent value to COB planning that goes well beyond a “plan” or product





SMS SECURE MILK SUPPLY

SMS Plan Components

- Foot-and-Mouth Disease
- SMS Partners
- State/Regional Project
- Public Health
- Links

Foot-and-Mouth Disease

Foot-and-mouth disease (FMD), sometimes referred to as "hoof and mouth", is a highly contagious viral disease of cattle and other cloven-hooved animals such as pigs, sheep, and goats. FMD is not a public health concern. Signs of illness in affected animals include fever, blisters that become ulcers on the mouth, tongue, feet or teats, increased salivation or slobbering in cattle, decreased feed consumption, and lameness.

The last FMD outbreak in the U.S. was in 1929; however, the disease is common in other parts of the world and therefore poses a risk to the U.S. If FMD is diagnosed in the U.S., the control measures would include movement restrictions which will affect over-the-road transport of live animals and animal products (milk, colostrum, semen, embryos).

- [Disease Information](#)
Hosted by the Center for Food Security and Public Health at Iowa State University, access fact sheets, disease images, a PowerPoint presentation, vaccination guidelines, and many other FMD resources.
- [FAD PReP Dairy Industry Manual](#)
This Manual provides a broad overview of U.S. dairy production methods and the procedures that may be used in the event of a highly contagious FAD outbreak. Livestock producers, their employees, response team members and policy makers are the intended audience.
- [Classification of Phases and Types of an FMD Disease Outbreak and Response](#)
March 2013
Comments are being accepted on this guideline document developed to aid rapid decision making to facilitate response planning and development of business continuity plans in the event of an FMD outbreak in the United States or North America.
- [Inactivation of FMD Virus in Milk Products](#)
The U.S. Dairy Export Council funded this literature review conducted by the Center for Food Security and Public Health at Iowa State University that summarizes the inactivation of FMDV in milk and milk products.
- [FAD PReP/NAHEMS Guidelines: Appendix A: Vaccination for Foot-and-Mouth Disease \(2011\)](#)
Appendix A: Vaccination for Foot-and-Mouth Disease covers the disease-specific strategies and general considerations related to the use of vaccine as an aid to control an outbreak of foot and mouth disease (FMD) in the U.S.
- [USDA FAD PReP FMD Response Plan "The Red Book"](#)
- [OIE Terrestrial Animal Health Code, FMD](#)

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



For More SFS Information

<http://www.cfsph.iastate.edu/Secure-Food-Supply/index.php>

- ✓ Secure Food Supply Plans
- ✓ USDA Foot-and-Mouth Disease Response Plan "The Red Book"
- ✓ Phases & Types of an FMD Outbreak
- ✓ NAHEMS Guidelines: Continuity of Business
- ✓ NAHEMS guidelines: Vaccination for contagious diseases; Appendix A: Vaccination for Foot-and-Mouth Disease
- ✓ FMD Vaccine Surge Capacity for Emergency Use in the United States
- ✓ Inactivation of Foot-and-Mouth Disease Virus in Milk Products
- ✓ Foot and Mouth Disease in Pigs - Progression of Lesions



Acknowledgements

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Thank you!

