



*Pacific NorthWest  
Economic Region*



**Cross Border**  
Livestock Health Conference

**2011 Pacific Northwest Economic Region  
Annual Summit  
Portland, OR**

**Cross Border Livestock Health Conference  
July 21-22, 2011**

*Hilton Portland & Executive Tower  
921 SW 6th Avenue  
Portland, Oregon 97204*

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## INTRODUCTION

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### Background and Objectives

The 2011 Cross Border Livestock Health Conference (CBLHC) took place July 21 and 22, 2011 in conjunction with the 21<sup>st</sup> Pacific Northwest Economic Region (PNWER) Annual Summit. The CBLHC focused on the impact of a hypothetical Foot and Mouth Disease (FMD) outbreak in the Pacific Northwest affecting the USA/Canada border. Participants discussed preparedness, response and recovery using a scenario driven workshop format.

The main objective of the two day conference was to enhance cross border cooperation on animal health issues. Specific objectives were:

- ◆ Enhanced relationships and build networks between US state and Canadian provincial jurisdictions
- ◆ Exchange information on animal health issues/concerns
- ◆ Develop a common understanding of disease policies
- ◆ Exchange information on emergency response for emerging and foreign/transboundary animal diseases
- ◆ Advance Canadian and American animal health interests
- ◆ Identify and execute action items to collectively address animal health and cross border issues

The conference began with a review of the 2010 action items developed at the CBLHC conference held in Calgary, AB. The morning session consisted of background presentation on FMD as well as presentations on FMD response of provinces, states, Canadian Food Inspection Agency (CFIA) and USDA-APHIS (United States Department of Agriculture – Animal and Plant Health Inspection Service). Over the lunch break a discussion regarding electronic certification for livestock and meat crossing the USA/Canada border took place. The afternoon session focused on movement control issues as well as the table/large group discussions centred on a FMD scenario affecting the Pacific Northwest. The morning session of the second day focused on FMD vaccination strategies as well as table discussions/large group discussions on FMD vaccination strategies that could be employed in the hypothetical FMD scenario.

At the end of the session action items were developed based on the discussion that took place over the past two days. Action item leads and team members were also identified. Progress on action items will be communication to the conference participants through email and postings on the CBLHC website <http://www.cblhconference.com/index.html>. Conference action items will be presented to the PNWER Executive Board, which is



comprised of state and provincial legislators from around the region. These action items will also be presented to federal leadership in Washington, DC and Ottawa, ON to further advance regional animal health concerns. The CBLHC website will be maintained and used as a communication tool to share information with past and future conference participants. PNWER will also collaborate with the CBLHC Action Item Team to identify how the organization and legislators can advocate on behalf of the group.

## AGENDA

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### July 21 Morning

Morning Session oriented towards non-animal health professionals. Intended to provide background on FMD and various response responsibilities of State, Provincial, and Federal agencies.

Time	Session	Speaker
9:30-9:50	Opening Remarks/Welcome	Agriculture Working Group Chair: Richard Marz, MLA for Alberta
	Review of Action Items 2010	Cross Border Livestock Health Conference Co- chairs:  Dr. Greg Douglas, Chief Veterinary Officer, Saskatchewan Ministry of Agriculture  Dr. Don Hansen, State Veterinarian, Oregon Department of Agriculture
9:50-10:30	Background presentations on FMD	Dr. Paul Kitching – Chief Provincial Veterinarian BC Ministry of Agriculture and Lands
10:30-10:45	Break	
10:45-12:00	Background Presentation on FMD Response and Panel Discussion <ul style="list-style-type: none"> <li>- State</li> <li>- Provincial</li> <li>- CFIA</li> </ul>	State: Dr. Don Hansen, State Veterinarian, Oregon Department of Agriculture  Provincial: Dr. Greg Douglas, Chief Veterinary Officer, Saskatchewan Ministry of Agriculture

	<p>- USDA</p> <p>Notes: “What does it look like locally and then how does it affect nation.” -Movement control issues</p>	<p>CFIA: Dr. Jagvinder Dhanda, Veterinary Program Specialist, Canadian Food Inspection Agency</p> <p>USDA: Dr. Brian McCluskey, Chief Epidemiology Officer, APHIS Veterinary Services</p>
<p>Working Lunch 12:00 – 1:00</p>	<p>Presentation and Discussion on Electronic Certification</p>	

### July 21 Afternoon

Afternoon Session oriented towards detailed discussion among animal health professionals and livestock producer groups on FMD movement control issues (To include possibility of Specified or Defined Areas of Control within states and provinces and across international border).

Time	Session	Speaker
1:00-1:20	Explain afternoon activities and introduction of FMD scenario	Dr. Don Hansen, State Veterinarian, Oregon Department of Agriculture
1:20-2:15	Background on Movement Control Issues, including possibility of “zones” or “regions” of control as described above	<p>Brad Andres, Emergency Management Coordinator, Alberta Agriculture and Rural Development</p> <p>Dr. Gerald Hauer, Chief Provincial Veterinarian, Alberta Agriculture and Rural Development</p>

2:15 - 3:00	Table discussion on Movement Control Issues	Facilitated by Conference Co-Chairs
3:00 – 3:15	Break	
3:15 - 4:00	Table Groups report out on discussion	Facilitated by Conference Co-Chairs
4:00 - 4:45	Panel Discussion	<p>State – Don Hansen          Provincial – Greg Douglas          CFIA- Jagvinder Dhanda          USDA – Brian McCluskey</p> <p>Transportation Industry Representative – Mike Nikolaisen – Miane Creek Livestock</p> <p>Industry Representative – Aaron Canart – Agri Beef Co.</p>
4:45 – 5:00	Recap of Day 1	Facilitated by Conference Co-Chairs

**July 22 Morning**

Morning Session oriented towards detailed discussion among animal health professionals and livestock producer groups on vaccination.

<b>Time</b>	<b>Session</b>	<b>Speaker</b>
9:00 – 9:45	Background on FMD Vaccination	Dr. Dorothy W. Geale, Senior Staff Veterinarian - Foreign Animal Disease, Canadian Food Inspection Agency  Jane A. Rooney, Senior Staff Veterinarian, USDA, APHIS Veterinary Services
9:45 -10:30	Table Discussion on Vaccination and protocols and scenarios	Facilitated by Conference Co-Chairs
10:30-10:45	Break	
10:45-11:15	Large Groups Discussion on Vaccination	Facilitated by Conference Co-Chairs
11:15-11:45	Tables Report on Discussion on Vaccination	Facilitated by Conference Co-Chairs
11:45 – 1:00	Wrap-up and Action Items **Working Lunch provided in conference room.	Facilitated by Conference Co-Chairs
1:00	<u>Adjourn</u>	

## PRESENTATIONS

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All presentations are available on the PNWER website

<http://www.pnwer.org/2011AnnualSummit/Presentations.aspx>

### DAY 1

#### **Foot and Mouth Disease**

*Dr. Paul Kitching – Chief Provincial Veterinarian, British Columbia Ministry of Agriculture and Lands*

Dr. Kitching provided a presentation on FMD, specific topics included: virus characteristics, transmission, disease carriers, testing, issues surrounding predictive models of spread, consequential costs of FMD and vaccines. Dr. Kitching also discussed previous FMD cases, including FMD in the United Kingdom in 2001, the Netherlands in 2001 and Bulgaria in 2011. Some key points from this presentation are:

- ◆ FMD virus is very easy to kill by taking it out of it's normal pH range
- ◆ The 7 serotypes of FMD vary considerably
- ◆ Illegally imported products have the potential to bring FMD into an FMD-free country since very little product is extensively searched prior to entry
- ◆ Pigs shed significant quantities of the virus and cattle are easily infected with airborne virus due to large lung capacity
- ◆ Sheep symptoms are not easily distinguishable, typically lameness is a symptom however this does not normally indicate FMD
- ◆ Diagnosing positives is a relatively easy process; however negatives are difficult because they need to be confirmed as negative. In order to confirm the virus must be grown which can take up to 4 days.
- ◆ Animal welfare is a huge concern in a FMD outbreak because animals are still growing but there are no markets available
- ◆ Vaccination is becoming a more practical method on slowing the spread of the disease. Mass slaughtering millions of animals has become unacceptable to the public as a method of disease control

#### **Saskatchewan Perspective on FMD Response**

*Dr. Greg Douglas – Chief Veterinary Officer, Saskatchewan Ministry of Agriculture*

Dr. Douglas provided a presentation outlining the FMD response in Saskatchewan. The livestock industry in Saskatchewan has the second largest beef herd in Canada and there also is a large diversity of other livestock species raised in Saskatchewan. Dr. Douglas discussed the Foreign Animal Disease Emergency Support (FADES) Plan which is an agreement between the Government of Saskatchewan and the Canadian Food

Inspection Agency (CFIA). The FADES plan discusses emergency management coordination and roles and responsibilities of the Government of Saskatchewan. With all reportable animal diseases, the Government of Saskatchewan provides support to CFIA in disease identification, control, eradication and recovery. The Saskatchewan Ministry of Agriculture has many key roles in a disease response some of them include: animal welfare slaughter, animal disposal advice and geographic information systems (GIS) support.

### **Oregon Perspective on FMD Response**

*Dr. Don Hansen – State Veterinarian, Oregon Department of Agriculture*

Dr. Hansen provided a presentation outlining the FMD response in Oregon. Oregon's livestock industry is a large contributor to the state's economy. Animal movement into and out of Oregon is significant, for example > 1,000,000 cattle are exported and/or change ownership yearly. Foreign Animal Disease Diagnosticians (FADD) are either state or federal veterinarians trained to respond to a FAD suspect case and training FADDs occurs regularly. Dr. Hansen also discussed the USDA-APHIS's Foreign Animal Disease Preparedness and Response Plan (FAD PReP) and the Oregon Animal Disease Emergency Management Plan. Oregon's initial response is to look for all vesicular lesions and immediately contact USDA after the quarantine has been placed. Oregon State veterinary staff would be available to support at all levels of the response. Brand inspectors could be a resource for on-ground response.

### **FMD – Canadian Response**

*Dr. Jag Dhanda – Veterinary Program Specialist, CFIA*

Dr. Dhanda provided a presentation which focused on CFIA's emergency management plans, which include: CFIA Emergency Response Plan, Animal Health Functional Plan, and FMD Hazard Specific Plan. He also discussed partnerships with other federal departments as well as provincial/federal agreements (FADES plan). In Canada all vesicular diseases are reportable, therefore if one suspects the presence of one of these diseases they are obligated to report it. Confirmation of disease takes place at the National Centre for Foreign Animal Disease Laboratory in Winnipeg, MB. The FMD Hazard Specific Plan discusses the CFIA's stamping out policy which includes: pre-emptive slaughter, emergency vaccination and regionalization/zoning. The incident command system (ICS) in animal health emergencies is utilized because it has the ability to expand and contract depending on the size of the disease event.

## **Responding to a Foot and Mouth Disease Outbreak – USA perspective**

*Dr. Brian McCluskey – Chief Epidemiology Officer, USDA-APHIS*

Dr. McCluskey discussed the USDA-APHIS response to FMD in the USA. An overview was presented of the FAD PReP FMD Response Plan (red book), National Animal Health Emergency Management Systems (NAHEMS) Biosecurity Guidelines and the Secure Milk Supply Plan (under development). Currently the USDA is looking to modify their FMD response strategy to include other methods rather than strictly stamping-out. These include stamping-out modified with emergency vaccination to slaughter, emergency vaccination to live and vaccination to live policy without stamping-out. The USDA utilizes an ICS structure in order to respond to an event. The USDA also has the ability to activate ROSS (resource and ordering status system), as well, can access the National Veterinary Stockpile. Conformation of disease takes place at the Plum Island Animal Disease Centre, NY. FAD PReP documents are available online at <https://fadprep.lmi.org>

## **E-Certification/Regulation Cost**

*Aaron Canart – Livestock Division, Risk Management, Agri Beef Co.*

Mr. Canart discussed the issues surrounding moving cattle over the US/Canada border. There is a significant amount of paperwork required to export cattle due to the one load lot requirement. Not only is this a financial issue but it also has animal health implications. Allowing paper work to be transmitted electronically would significantly reduce the amount of transportation required for signatures from accredited and federal veterinarians on both sides of the border.

## **Discussion items:**

Dr. Larry Delver mentioned that waiting for papers to be signed for export could cause animal welfare issues. Dr. Eugene Janzen discussed how veterinary students are getting more actively engaged in animal welfare and some have issues with animal identification methods, such as branding.

Dr. Gerald Hauer discussed that the biggest limitation with e-certification is funding and information technology development. Dr. Hauer raised the question why produce can move so quickly over the border but it takes much longer for meat and livestock?

Mr. Rick McDonald stated that the CFIA may use import/export of animal genetics as a model. There has been difficulty from changing from paper to electronic copies. Some issues with paper copies are they can be misplaced, there is no database and statistics are not easily obtained. Electronic information helps to manage and monitor herds much more efficiently.

Mr. Brandon Hardenbrook discussed PNWER meetings in Washington, DC and Ottawa, ON and the CBLHC group should provide some recommendations for PNWER to present as a position paper. Mr. Hardenbrook acknowledged the obstacles and those resources cannot be taken away from market access for e-certification.

### **Movement control during an animal disease outbreak response**

*Dr. Gerald Hauer - Chief Provincial Veterinarian, Alberta Agriculture and Rural Development*

*Mr. Brad Andres - Emergency Management Coordinator, Alberta Agriculture and Rural Development*

Dr. Gerald Hauer provided a presentation on movement control and why it is important when dealing with an FMD outbreak. He provided an FMD spread scenario within Alberta that showed the mass amount of cattle movements within that province. The amount of movement within Alberta could facilitate spread of FMD extremely quickly, within 5-7 days almost the entire province could be infected. Dr. Hauer also provided other countries who utilized movement control to contain diseases, such as FMD in Japan in 2010 and Equine Influenza in Australia in 2007.

Mr. Brad Andres discussed some of the terminology used in movement control, as well provided the similarities and differences in terminology between Canada and USA. Mr. Andres also discussed the difficulty with determining what things should be stopped once you stop the movement of animals and animal products, i.e. farm equipment, milk truck, visitors and schools, colonies, fire trucks, ambulances, etc. Other issues surrounding movement control are proper communications, enforcement, animal welfare and continuity of business.

## **DAY 2**

### **North American Foot and Mouth Disease Vaccine Bank (NAFMDVB)**

*Dr. Dorothy Geale – Senior Staff Veterinarian Foreign Animal Disease, CFIA*

Dr. Geale provided an overview of the NAFMDVB which is commissioned by the Chief Veterinary Officers of Canada, USA and Mexico. Funding contributions are based on the proportion of susceptible animal populations in a country; currently Canada contributes 10 %, USA 70 % and Mexico 20 % of the budget, however the budget does vary. The NAFMDVB stores vaccine antigen concentrates of 'core', 'popular' and 'niche' Merial strains of FMD. The USDA administers the NAFMDVB with the storage of the antigens at Plum Island Animal Disease Centre, NY. Prior to the decision to vaccinate: the NAFMDVB will be notified, manufacturer will be notified, an assessment of the capacity of strain to protect in an outbreak and confirmation of the serotype and subtype and where to source from if NAFMDVB does not store the strain in the bank will all occur.

When vaccination is requested in more than one country the country with the animal population at greatest risk will receive it first in order to benefit all of North America.

### **Response to an FMD outbreak: Use of vaccination in control strategies**

*Dr. Jane Rooney – Senior Staff Veterinarian, USDA-APHIS*

Dr. Rooney discussed traditional FMD response strategies in the USA which are stamping out and disposal. There are significant challenges with depopulation and disposal. Depopulation requires significant time and labour. Disposal is also very difficult due to the large biomass created when animals are euthanized. The USA is developing new strategies to deal with an FMD event based on strategies recognized by the World Organisation for Animal Health (OIE). These include: stamping-out modified with emergency vaccination to slaughter, stamping-out modified with emergency vaccination to live and vaccination to live without stamping-out. Currently the FMD Vaccination Policy for USA is under development but USDA does have documents related to FMD vaccination including the FAD PReP FMD response plan contains a section related to FMD vaccination.

### **Vaccination as a control strategy for Canada**

*Dr. Dorothy Geale – Senior Staff Veterinarian Foreign Animal Disease, CFIA*

Dr. Geale described that after the 2001 FMD case in the United Kingdom many countries have looked to vaccination as a good control measure during a FMD outbreak. CFIA's policy still utilizes quarantine, movement control, tracing and surveillance with stamping out, however regionalization/zoning is recognized to help minimize trade implications and the use of emergency vaccines is currently under review. These CFIA's policies are in line with OIE recommendations and the European Union principles. Within the CFIA a FMD Standard Operating Procedure (SOP) is currently being developed.

## **WESTERN U.S. AND CANADA FMD EXERCISE SCENARIO**

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### **Day One:**

*9:00 AM*

A local veterinarian was called out to examine a group of dairy heifers in Tillamook, Oregon that were not eating well, exhibiting excessive salivation and some lameness. Approximately 20% of the 150 heifers were showing obvious signs. There had been no deaths other than a couple of calves that may or may not be related to the ongoing epidemic.

The attending veterinarian examined a number of animals showing clinical signs. They were febrile, and displayed oral and coronary band vesicular lesions. One of the heifers exhibiting vesicular lesions was the son's prize heifer.

The veterinarian questioned the owner about possible sources for a vesicular disease outbreak, i.e., imported cattle, foreign visitors, etc. He discovered that ten days ago the owner's son came home on leave from military duty in South Korea. The son had grown quite fond of sundae (Korean pork blood sausage) during his deployment and had brought some of the sausage back into the country for his family to enjoy being unaware of the potential consequences. The day he got home, the family prepared a meal with the sundae and then afterward proceeded to work the cattle by treating a few heifers with oral sulfa boluses. The son also helped bottle feed the calves and spent some time with his prize heifer training her to halter lead.

*10:30 AM*

The attending veterinarian had enough information to suspect that he might be looking at a FMD infection. He then called the State Veterinarian immediately, informing him that he had a suspect case of FMD. After discussing the symptoms seen and considering the possible source, the State Veterinarian took a number of actions as follows:

- ◆ Instructed the attending veterinarian to quarantine the premises and await the arrival of the Foreign Animal Disease Diagnostician (FADD).
- ◆ Notified USDA-APHIS-Veterinary Services (VS) and Oregon Department of Agriculture for administration of the possible FMD case in Tillamook.
- ◆ Worked with the Oregon USDA Area Veterinarian in Charge (AVIC) that dispatched a FADD and assist with obtaining samples and begin epidemiologic work.
- ◆ Notified Oregon State University- Veterinary Diagnostics Laboratory (OSU-VDL) and the Plum Island Foreign Animal Disease Lab that they would be receiving priority one samples that likely contained FMD material.

- ◆ Made arrangements for the assistant to carry the samples to New York to hand off to USDA officials at Plum Island Animal Disease Centre.

*12:00 PM*

The FADD examined the affected animals and concurred with a likely diagnosis of FMD brought from South Korea. Samples of blood, nasal swabs, saliva and skin were taken from symptomatic animals and split for diagnostic work up at the National Animal Health Laboratory Network (NAHLN) lab at Oregon State College of Veterinary Medicine and the Plum Island Animal Disease Centre. The FADD remained on the farm to maintain the quarantine and complete the animal history information that may pertain to this event. The assistant delivered the samples in bio-secure fashion. The attending veterinarian went home, with instructions not to visit another farm for five days.

*3:00 PM*

The second split samples were sent by plane to New Jersey to be met by USDA officials from Plum Island, New York.

*4:00 PM*

The epidemiological investigation revealed the following information.

- ◆ The first sick animal that the producer remembered seeing had started showing symptoms four or five days ago. He examined the first few he saw and could not see anything in their mouths to cause the excessive slobbering. He treated them with antibiotics and thought they might get better.
- ◆ Four days ago he shipped six heifers to a dairy farmer located near Hague in Saskatchewan. The official veterinary inspection and testing of these animals was completed some days before any animals were exposed to FMD. (The law allows official inspections to be completed 30 days before actual shipment) The animals were shipped after the Canadian buyer paid for them. The driver is believed to have stopped over night near Cranbrook, British Columbia.
- ◆ Three days ago he shipped four bull calves to a calf raiser who took them to his calf raising facility in Yakama, Washington. The veterinarian who did the inspection for the bulls completed his inspection three days before they were shipped (one day before the first animals showed any clinical signs of FMD).
- ◆ The investigator left phone and text messages for the drivers who transported cattle off the farm with instructions to contact the Oregon State Veterinarian.
- ◆ The herd is closed and has not imported any animals for several years.
- ◆ The heifers have fence line contact with neighbour's cattle on two sides of their pen as well as contact with the dairy's own dry cows.

*5:00 PM*

The first split samples arrived at the NAHLN lab and were processed immediately.

*10:00 PM*

The NAHLN facility at OSU has Polymerase Chain Reaction (PCR) positive results for FMD. The Oregon AVIC and the State Veterinarian notify officials at Plum Island Animal Disease Centre of the Oregon lab's positive FMD result. They also notified regional and national USDA officials and discussed with them a recommended course of action to release the results to a wider audience. USDA officials informed the appropriate CFIA officials of the potential FMD event in Oregon. Government officials then decided to wait for the results from Plum Island Animal Disease Centre before taking any further action.

*11:00 PM*

The flight arrived in New Jersey with the second split sample (2:00 AM EST) and the samples were then transported to Plum Island where they were processed immediately.

**Day Two:**

*4:00 AM*

USDA officials at the Plum Island Lab confirm FMD (7:00 AM EST) and informed regional and national USDA officials of the confirmed FMD result. In turn, USDA officials notified the Oregon AVIC and the State Veterinarian of the confirmed result and set up a conference call for 5:00 AM to discuss response activities.

USDA officials informed appropriate CFIA officials of the positive result and potential exposed herd near Hague, Saskatchewan plus potential exposure from exposed livestock travelling through British Columbia and Alberta on their way to Hague.

The Oregon AVIC and the State Veterinarian notify everyone on the Oregon Animal Disease Emergency Contact list of the conference call at 5:00 AM (PST) with ODA Director, Oregon AVIC, Governor's office, Oregon State Emergency Director, Tillamook Emergency Manager and other city/county officials and the United States Chief Veterinary Officer and his staff to discuss immediate response activities in Oregon and within USDA.

*5:00 AM*

USDA-APHIS-VS officials confirm diagnosis and authorize official response. The epidemiological information collected by the FADD is presented and questions by conference call participants followed. Another conference call was scheduled for 8:00 AM PST for all national, regional, state and provincial officials.

*6:00 AM*

Tillamook officials begin making arrangements for ODA/USDA responders and notifying their officials of the outbreak and preparing for a 7:00 AM (PST) conference call with State and USDA animal health officials to discuss Oregon/Tillamook action plan. The

State Emergency Operation Center (EOC) is organized and a county EOC in Tillamook is set up as a staging area and local Incident Command Post (ICP).

*7:00 AM*

By 7:00 AM (PST) animal health officials in Washington and Saskatchewan, where exposed animals have been shipped from the index farm, were notified. Animal health officials from Idaho, British Columbia and Alberta were notified about the potential exposure from livestock shipped through their state or province on their way to Hague. All were invited to participate in the conference call at 8:00 AM to discuss potential responses.

A state/provincial Joint Information Center (JIC) is set up and prepares to send out an initial press release and prepares information for distribution to local farmers and business people.

State, Federal and local animal health officials were deployed to the Tillamook ICP to begin the tasks of control for this outbreak.

ICP staff members (typically called the incident management team) must deal with a number of issues, as follows:

- ◆ Movement control, quarantine area, buffer area and surveillance area
- ◆ Coordinate with State and local law enforcement to man checkpoints and provide security
- ◆ Security at index farm
- ◆ Road blocks to establish quarantine in appropriate area
- ◆ Erect disinfection stations at roadway quarantine check points
- ◆ Public information releases - coordinate with USDA, LPA, State public affairs offices and eventually the JIC
- ◆ Indemnity for livestock euthanized
- ◆ Depopulation options for cattle and other affected animals
- ◆ Carcass disposal options
- ◆ Continuity of business options for milk and other commodities where possible
- ◆ Logistics such as where to locate the ICP and staging areas, how to manage supplies and assets from the National Veterinary Stockpile
- ◆ Consider vaccination implementation options including a census of animals within the vaccination zone
- ◆ Develop a Surveillance Plan/Working with the Lab
- ◆ Coordinate with USDA Wildlife Services and State wildlife officials

8:00 AM

In Canada, the CFIA's Area Foreign Animal Disease Specialist and the office of the provincial Chief Veterinary Officer notified the CFIA's District Office in Regina, Saskatchewan of the trace. An investigating team was dispatched to the exposed farm and discovered that two of the six heifers imported from Oregon are exhibiting early stage vesicular lesions on their mouths and tongues.

The investigating team collected the appropriate samples and has submitted them for a diagnostic workup. The team also places the herd under quarantine pending results from the lab. (By late afternoon the lab will report positive PCR FMD results.)

In Washington State the State Veterinarian and the Washington AVIC send an investigator to the exposed facility to sample the calves from Oregon. Samples are driven to the NAHLN laboratory facility at Washington State University to be tested for FMD. (They will be found to be PCR positive for FMD at 4:00 PM.)

In the meantime, FADDL continues to work up the samples and test them to determine the serotype and sub type and perform vaccine matching to vaccines within the NAFMDVB.

The drivers did not return calls or messages as of 1:00 PM

## SCENARIO DISCUSSION

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Below is a summary of the general discussion that took place after small groups worked through the FMD Scenario Workbook.

### Day 1

#### **Quarantine Area**

*1. How would you establish quarantine areas? Please describe and reference maps provided.*

- ◆ Base it on:
  - Geography
  - Population – humans and livestock
  - Livestock movement patterns
  - Risk
- ◆ Least number of control points
- ◆ Land location: physical and identifiable
- ◆ “GO BIG”: state, county, province
- ◆ Should you exclude town sites?
- ◆ Mapping in the control area help manage the situation by identifying the number of premises and determining how to manage resources

*2. How do you establish quarantine, surveillance and buffer areas that overlap state borders? State/Provincial Borders?*

- ◆ Talk to colleagues
  - State, Provincial, National, Industry
  - Coordinate state-province and USDA-CFIA
- ◆ Require a Joint/Unified Command Structure under the Incident Command System (ICS)
  - Identify the Incident Commander
  - Designate a liaison to provide information between both countries

*3. What do you want to do about the path that the cattle traveled from Oregon to Hague, SK and from Oregon to Yakima, WA?*

- ◆ Interview the trucker, dispatch and shipping company
  - Determine next loads
  - Where they stopped along the way
- ◆ Risk of spread from animal transit

- Dr. Paul Kitching discussed that there is limited evidence of spread during transit. However, transmission during transit could be possible under ideal conditions.

*4. What do you want to do about the potential over night stay near Cranbrook, BC?*

- ◆ An onsite investigation should occur
  - Interview the trucker to determine:
    - Where (s)he stayed?
    - Where the animals were unloaded?
    - Where the truck was parked?
    - Was there any commingling during transit?

*5. How are wildlife involved with this event?*

- ◆ There is potential for cattle to come into contact with wildlife but chances are minimal
- ◆ Very large elk population in Tillamook, OR
- ◆ Clinical signs in elk are minimal and they do not shed the virus for long periods of time; therefore it may be difficult for wildlife to sustain infection
- ◆ Depopulation of wildlife would be extremely difficult

*6. How do you want to coordinate with USDA Wildlife Services/Environment Canada and state/provincial wildlife officials?*

- ◆ Inform provincial/federal Fish and Wildlife/Environment agencies
  - Information sharing among governments
- ◆ An onsite investigation at each truck stop would help to determine risk of FMD spread to wildlife
- ◆ Conservation officers could be of assistance on area issues.

**Movement Control**

- 1. How will you coordinate with state/provincial and local law enforcement to man checkpoints and provide security?*
  - ◆ USDA/CFIA would set up checkpoints and other agencies could provide security such as:
    - RCMP, State Police, Animal Control/Protection Officers, brand inspectors, military
  - ◆ Rapid response to control movement is critical
  - ◆ Formal emergency declaration/Governor's Proclamation to help determine authorities

- ◆ Chief Veterinary Officers (CVOs) have the authority to designate officials during an animal health emergency
- ◆ Industry's involvement in movement control is paramount
- ◆ Biosecurity messaging is extremely important for all people involved

2. *How do you want to stop movement (Road blocks with vehicles, blocks with portable barriers, road signs, others)? Explain your choice(s).*

- ◆ Checkpoints with road blocks
  - Advertising and messaging needs to be clear with road blocks
  - Alternate route needs to be determined for low-risk traffic
- ◆ Messaging requires involvement from producer groups and media
- ◆ Social media is a good method to quickly disperse messaging however it information cannot be controlled therefore there is the chance wrong information could be dispersed

3. *Who do you want to stop (everyone, livestock haulers only, etc.)?*

- ◆ Animals, animal products and animal support industries
  - Everything related to these three items require movement control
  - This includes stock trucks, milk trucks and animal haulers
  - Increased biosecurity measures are required
- ◆ Loaded trucks would be the highest risk
- ◆ However other animal products can be a risk
  - i.e. in the 2001 FMD outbreak in UK dead lambs were ground into feed and fed, consequently spreading FMD
- ◆ Focus should be placed on traffic originating from within the infected area

4. *Where do you want to stop movement (How far from infected farms, exposed farms, borders, natural barriers, etc.)?*

- ◆ Buffer zones and surveillance zones should be determined
- ◆ Best to set large zones immediately and reduce size later if necessary

5. *What do you want law enforcement officials to do with persons who refuse to comply?*

- ◆ Fine, impoundment
- ◆ If they are hauling livestock send them back to origin
- ◆ Need to determine authority during a situation like this
  - What authorities do states/provinces have to contain an epidemic? If authority is insufficient, work with legislature to improve rules.

6. *How do you want to establish/maintain security at index/exposed farms?*

- ◆ Security personnel
- ◆ Biosecurity personnel
- ◆ Keep commodity on site
- ◆ Keep onlookers off-site
  - Media etc.

7. *Specifically, how do you want to establish and run disinfection stations at roadway quarantine check points?*

- ◆ Mobile disinfection units would be the most practical
  - Require power washers, disinfectant and clear signage
- ◆ Check environmental regulations at disinfection site to ensure there will be no issues

8. *How will you coordinate your surveillance plan with the lab systems and maintain biosecurity?*

- ◆ Ensure transport guidelines are followed when shipping samples to labs
- ◆ All FMD suspect cases must be sent to National Centre for Foreign Animal Disease Laboratory in Winnipeg, MB in Canada and to Plum Island Animal Disease Centre, NY in USA.
- ◆ Prioritize sampling
- ◆ Secure transport
- ◆ Determine lab capacity
- ◆ Biosecurity, a “one way” approach
- ◆ ICS structure will be useful for coordination of surveillance, biosecurity and sample collection/shipment

9. *Discuss how and why you chose the Incident Command Post (ICP) and staging areas locations? How will you manage supplies and assets from the National Veterinary Stockpile?*

- ◆ Locate it close to the area and easily accessible
- ◆ Requires sufficient space
- ◆ Communications network required
- ◆ National Veterinary Stockpile takes 24 hours to access and states have a place to hold the stockpile
  - Can be accessed by Canada and Mexico if required

- ◆ CFIA district offices would have significant amount of supplies for ICP and staging areas

*10. How do you want to handle public information releases? Target Audiences?*

- ◆ Media releases
  - Give the media information regularly, otherwise they will search for information elsewhere which can lead to misinformation
  - Common messaging for government, industry and producers is critical
  - Determine what information can be shared
- ◆ Media needs to be aware of biosecurity protocols within control areas
- ◆ Teleconferences should be held each morning to ensure sharing of information and updating people involved
- ◆ Designated spokesperson is useful and provides a contact for the media
  - Designated experts are critical to relay correct information
  - Media like talking to local people therefore it may be useful to relay messaging to a local spokesperson
- ◆ Dark website may be helpful to share information between directly involved organizations and agencies

**Indemnity**

*1. How will the value of euthanized animals be established?*

- ◆ USA has a model for reimbursement
- ◆ CFIA establishes value of legislative maximums based on market values but the established price also provides more to cover for the cost of cleaning and disinfection.

*2. What about payment for lost commerce?*

- ◆ Lost commerce is not part of established values for indemnity when a herd is ordered destroyed by CFIA
- ◆ When herds are ordered destroyed tax implications may occur; therefore in Canada special financial departments may assist local industry with possible tax deferrals based on the circumstances which would be similar to other disaster recovery programs.

**Depopulation Options**

*1. What are some depopulation options for cattle and other affected animals?*

- ◆ On farm – captive bolt
  - Time and labour consuming

- ◆ Out of business abattoir

2. *How do you want to depopulate exposed and/or infected animals?*

- ◆ To prevent FMD spread, on-farm euthanasia would be the most appropriate
- ◆ Mobile slaughter units have been developed, however they are expensive and not easily obtained in North America

3. *How do you want to handle carcass disposal?*

- ◆ Rendering plant
  - Could handle small scale outbreak; however there is no large scale rendering option
- ◆ Cooking and distribution
  - This will cause market issues
  - The meat would be safe for human consumption however it would be difficult to convince the public that it is safe
- ◆ Composting
  - Dr. Kitching discussed that composting does kill the FMD virus
- ◆ Burning
  - May be appropriate in certain circumstances
- ◆ Burial would be appropriate in areas with large land base and sparsely populated (i.e. Saskatchewan or Montana); however densely populated areas with limited land base would make this not be a viable option (i.e. BC Fraser Valley)

**Continuity of Business**

1. *Discuss the continuity of business options for milk and other commodities within the state/province/country.*

- ◆ Designate clean routes to clean processors within zones
- ◆ Milk products that are not normally pasteurized could use this as an option

2. *How are you going to maintain businesses within the quarantine and surveillance areas?*

- ◆ Community engagement is important to help maintain commerce
  - Educate the public to not be scared of the situation
- ◆ Other issues to deal with are mental and physical health issues of livestock owners
- ◆ Business recovery is one area that has not been planned
  - Border reopening is critical for trade

- Markets will certainly be closed therefore it is important to plan on how to reopen them
- ◆ Federal and provincial financial programs may help with business recovery

## Day 2

After the discussion regarding vaccination, table discussions were opened to discuss the following questions. Below is a summary of the larger group discussion.

### *1. How will you engage industry stakeholders in the decision to vaccinate?*

- ◆ Networking with the industry association groups, highlighting the importance of communication between stakeholder groups
  - This should take place prior to an emergency
  - During an emergency emotions are high and by identifying stakeholders and discussing the benefits of vaccination it will be much easier to implement
  - Other stakeholders who should be engaged are the transport industry, consumers, processors, producers of other commodities, veterinarians, etc.
    - Ensure these groups are not overlooked
  - Discussion of compensation related to vaccines must occur
  - Local level meetings with producers would be a good method in engaging producers
    - Avoid technical/bureaucratic language at these meetings
- ◆ Education on the various roles of vaccines
  - Messaging needs to be engaging for industry but also public needs to be informed that the meat from vaccinated animals is safe for consumption
  - Perception pre-empts science with media and consumers
- ◆ Regionalization and zoning – management of numbers is critical
  - i.e. California dairies – if the animals are not showing clinical symptoms with no decline in production- destroying these animals would not be an ideal option, vaccination may be more appropriate.
- ◆ Question posed – Is vaccination a guarantee that there is no virus in the animal?
  - No
    - There could be potential to spread the virus elsewhere?
      - Possibly, further processing of the animals could help eliminate this risk

2. *What type of vaccination strategy will you employ?*

- ◆ Decision comes down to how much an industry is worth vs. the industry of the entire country
- ◆ Vaccinate – to – live
  - Two different scenarios: beef cattle going to a feedlot live another 90-120 days and then are slaughtered, vaccinated dairy cattle will live for many years
  - If one part of the USA decides vaccinate – to – live, then it delays restoration of trade
- ◆ Is there any way to isolate and protect the high-value genetic stock?
  - AI and zoning may be a method to protect these animals
- ◆ Vaccinate – to – slaughter
  - This method can help manage FMD in an appropriate environment
  - Disposal via rendering: Currently renders are near full capacity, the surge of products to render may incapacitate the ability of renders to keep up with the demand
    - Possible solution: government build a large capacity rendering facility
- ◆ Cost to vaccinate
  - Needs to be considered
  - Would the overall long-term value of remaining free with vaccination be less expensive than allowing FMD to become endemic?
- ◆ CFIA and USDA have Memorandums of Understanding and regular communications regarding FMD vaccination decisions

3. *What will you need in terms of resources and a plan to receive and distribute vaccine?*

- ◆ Maintain communication chains with government and industries
- ◆ Organizations that already distribute animal medications
  - Veterinary schools have expertise and could assist
  - Veterinary stockpile – plan ahead of time (refrigeration may be necessary)
- ◆ Commercial vaccination companies
- ◆ Idle packing plants (if available)
- ◆ Number of resources dependent on number of animals needed to be vaccinated

4. *Would you recommend the use of government or other personnel for administration of vaccine?*

- ◆ Producers and veterinarians would be the best choice
  - Canadian Veterinary Reserve

- ◆ Proper record keeping during vaccination
  - Identify animals vaccinated
  - Supervise and monitor all vaccination activities
  - Form a vaccination coordinating group that is not comprised of only one government agency or department

## **COMMENTS AND QUESTIONS FOR FURTHER THOUGHT**

- ◆ Investigate what authority various jurisdictions have to stop movement
- ◆ Begin approaching legislators on predefined rule of engagement for people who do not comply with movement controls (i.e. for police officers)
  - National Cooperative Highway Research Program (NCHRP) Report 525 Vol.13
    - Guide to Traffic Control of Rural Roads in an Agricultural Emergency
- ◆ Addressing media's desire to communicate issue with needs of CFIA/USDA to communicate accurate information
- ◆ \*Federal spokesperson needs to communicate common messaging to industry, local producers and other groups
- ◆ How can we work together to address recovery after the animal health crisis i.e. bilateral trade and international trade to ensure continuity of business and market certainty?

## **ACTION ITEMS**

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### **Action Item 1 - FMD Vaccination**

**Description of Action Item** - Work with stakeholders to prepare in advance and build a common understanding of the tools (vaccination) and strategies that can be used to respond to an FMD outbreak in both Canada and the US.

**Team Lead** - USDA - Dr. Jane Rooney, CFIA - Dr. Tom Smylie

**Team Members** – CFIA - Dr. Jag Dhanda

### **Action Item 2 - FAD Zoning and Regionalization Recognition**

**Description of Action Item** - Work to support science and risk-based approaches to allow the safe resumption of bilateral and international trade after the eradication of a FAD. Develop and deliver common messaging to encourage proactive adoption of regulations that require science-based recognition of disease-free status of countries and zones, consistent with OIE guidelines. Delivery messaging as part of Oct. 2011 PNWER engagement in WSHDC and Dec. 2011 engagement in Ottawa. Identify other key venues to deliver messaging.

**Team Lead** – Alberta Agriculture and Rural Development -Peter Kuperis

**Team Members** – Agriculture and Agri-Food Canada - Allan Schlater, Canadian Animal Health Coalition - Ron Barker

### **Action Item 3 - Facilitation of Animal and Animal product trade through Information Technology**

**Description of Action Item** - Explore potential public-private funding sources, identify fiscal benefits to governments and encourage CFIA and USDA to design their IT systems in such a way that they are compatible. Recognizing that paperwork requirements impose significant costs on cattle buyers and sellers on both sides of the border, while subjecting animals to unnecessarily stressful welfare conditions, we urge both countries to move towards electronic certification for cattle on a much more aggressive timeline than is currently being considered.

**Team Lead** – Canadian Cattlemen’s Association - Louis Desautels



**Team Members** - - AgriBeef - Aaron Canart, British Columbia Cattle Feeders Association- Michael Nikolaisen, - Alberta Beef Producers - Larry Delver, Canadian Livestock Genetics Association - Rick McDonald, Montana Cattlemen - Brett Debruycker

## CROSS BORDER LIVESTOCK HEALTH CONFERENCE 2011

### ATTENDEES

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Name	Organization	State/ Province
Ron Barker	Canadian Animal Health Coalition	BC
Alan Schlachter	Agriculture and Agri-Food Canada	ON
Tim Hofstra	Alberta Milk	AB
Brad Leamaster	USDA, APHIS, VS	OR
Paul Kohrs	Washington State Department of Agriculture	WA
Pam Hullinger	UC Davis	CA
Dave Hodgeboom	WSDA	WA
Jane Rooney	USDA, APHIS, VS	MD
Brennen Schmidt	Government of Saskatchewan	SK
Kathryn Ross	Saskatchewan Ministry of Agriculture	SK
Heather Shewchuk	ASET	AB
Joe Heemskerk	BC Association of Cattle Feeders	BC
Aaron Canart	AgriBeef Company	ID
Mike Nikolaisen	BC Association of Cattle Feeders	BC
Rick McDonald	CLGA	ON
Donna Rise	Montana Department of Agriculture	MT
Rob McNabb	Canadian Cattlemen's Association	AB
Bob Harding	Canadian Swine Health Board	ON
Gene Hugoson	University of Minnesota	MN
Shelley Mehlenbacher	University of Minnesota	MN
Betty Green	Canadian Animal Health Coalition	MB
Eugene Janzen	UCVM, Calgary	AB
Brad Andres	Alberta Agriculture and Rural Development	AB
Gerald Hauer	Alberta Agriculture and Rural Development	AB
Peter Kuperis	Alberta Agriculture and Rural Development	AB
Nithi Govindasamy	Saskatchewan Ministry of Agriculture	SK
Jag Dhanda	CFIA	SK
Ann Ferguson	USDA APHIS	AK
Elizabeth Parker	National Cattlemen's Beef Association	DC
Brian McCluskey	USDA, APHIS, VS	CO
Paul Kitching	BC Ministry of Agriculture	BC
Jennifer Yezak	USDA Office of Intergovernmental Affairs	DC
George Groeneveld	Alberta MLA	AB
Larry Delver	Alberta Beef Producers	AB

Rob Swallow	Saskatchewan Ministry of Agriculture	SK
Lyle Stewart	Saskatchewan MLA	SK
Lara Zaluski	Government of Saskatchewan (Justice)	SK
Ryan Beierbach	Saskatchewan Cattlemen's Association	SK
Richard Marz	Alberta MLA	AB
Don Hansen	Oregon Department of Agriculture	OR
Greg Douglas	Saskatchewan Provincial Veterinarian	SK
Donna Mauro	Alberta Agriculture and Rural Development	AB
Claire Citeau	Alberta Agriculture and Rural Development	AB