

Animal Health Emergency Management Committee Report

April 6, 2005

The Animal Health Emergency Management Committee met on Wednesday, April 6 from 8:00 AM to 11:30 AM CDT, during the NIAA 2005 Annual Meeting in St. Paul Minnesota, with 110 people present. Dr. Lyle Vogel served as the Chair and Dr. Paul Sundberg served as the Vice-Chair.

The committee session focused on an update of USDA APHIS Veterinary Services Emergency Program activities and vaccination for foot-and-mouth disease. The following speakers presented relevant information pertaining to animal health emergency management.

Dr. Larry Granger, USDA APHIS Veterinary Services Emergency Programs Update:

- There are fundamental changes that are shaping the future. The establishment of the Department of Homeland Security, adoption of National Incident Management System, USDA-APHIS-VS emphasis on attribution of disease outbreaks, intelligence issues/gathering information on disease and disease risks, Select Agent Rule that limits laboratory access to disease causing agents, increased emphasis on surveillance for early detection of diseases, designation of agriculture as a critical infrastructure, international trade agreements that facilitate movement of agriculture products, and emergency/non-emergency funding through the Commodity Credit Corporation all have contributed to a new look at how USDA-APHIS is approaching their role of responding to animal health issues.
- The National Response Plan integrates Federal domestic prevention, preparedness, response and recovery into a single all-discipline, all-hazards plan. USDA has the responsibility for emergency support functions for agriculture, ESF-11.
- Awareness of intelligence content, trends in diseases in animal populations, early disease detection efforts, and modeling of highly contagious diseases epidemiology is also a component of the plan for prevention, preparedness, response and recovery. Prevention continues to be an important USDA activity. Preparedness involves training, monitoring and surveillance, conducting exercises, program and field activities, and disease modeling. Appropriate response includes an incident command structure that is implemented on the local level.
- There is a changing paradigm in Veterinary Services. There will be more emphasis on regionalization. There may be a need to treat different sectors of commodities differently – compartmentalization of the industry. Risk assessments will have an increased importance and the decreased availability of select agents to laboratories is two expectations. There will be increased collaboration with local, state and tribal authorities to be able to have enough people to deal with a disease outbreak.
- The development of the National Surveillance Unit and the National Animal Health Laboratory will assist in detection of disease. Area Emergency Coordinators will help with response. The Foreign Animal Disease Diagnostic Laboratory is increasing capability. The new laboratory in Ames, Iowa will provide resources for changes. The National Veterinary Stockpile has potential to help respond to a national disease outbreak.
- Challenges include reaction to decentralizing control and the implications from it. Restructuring APHIS is dependent on sufficient funding – both federal and alternate funding sources.

Dr. Larry Granger, Use of Foot-and-Mouth Disease Vaccination as Part of FMD Eradication Scheme –Vaccinate to Live/Salvage: Veterinary Services Perspective:

- Epidemiology is an important consideration in vaccine use since it modifies how an animal reacts to the disease agent. There are factors in disease spread and epidemiology to consider in deciding if to use or not use vaccine. There is a decision tree for FMD vaccine use as part of the North American FMD Vaccine Bank.

- Vaccination considerations include the species to vaccinate and the strategic deployment of the vaccine (e.g., a specific age group within a species), the human resources needed, the necessary authority to vaccinate may include legislation providing for mandatory vaccination, compensation to producers for lost production from vaccination and availability of vaccine.
- The 'vaccinate to live' concept provides for vaccination followed by continued life to the intended function of the animal. A 'vaccinate to slaughter' concept may be used to suppress amplification of the virus and those animals will be eliminated before they could contribute to disease spread.
- Considerations of vaccinating now, as a routine practice in the absence of disease, include economic factors – cost of vaccine, value of exports, value of vaccinated animals, affects on the cost, and complexity of surveillance. Implementing a stamping out philosophy is a time proven method for control of FMD. The decision of vaccination versus stamping out must be done with consideration of local factors that are known on the local level. The federal officials will not be knowledgeable of all of these factors.
- Currently, the objective is to return to FMD disease-free status as soon as possible. Epidemiologic modeling will help to prepare to make effective decisions early in an outbreak. The 'vaccinate to live' vs. the 'vaccinate to slaughter' is primarily an economic decision but it must take into account the social and political consequences and the physical resources available. The latter considerations could change the national objective to preserve the critical infrastructure, instead of to return to FMD disease-free status as soon as possible.

Dr. Tom McKenna, Use of Foot-and-Mouth Disease Vaccination as Part of FMD Eradication Scheme –Vaccinate to Live/Salvage: Foreign Animal Disease Diagnostic Laboratory Perspective:

- Conventional vaccines are effective in controlling clinical signs and limiting virus spread. They take up to 7 days to confer protection. They do not completely protect against infection. They also need to be boosted.
- Vaccination can slow spread without culling, thus saving the farm and protecting the environment. Vaccinated animals may stop international trade, they may become carriers of FMD if they are infected before vaccine protection is complete, they may be culled anyway and therefore will need support, and there are 7 serotypes without effective vaccine cross-protection and which require boosting every 2-4 months.
- Concern over vaccinated carrier animals drives the argument against vaccination but the international community wants to support vaccination. Current technology can differentiate vaccinated animals from infected animals most of the time but is that good enough?
- Vaccination is a two-way street – If we vaccinate, we must be ready to prove that we are FMD-free through extensive testing and if our trading partners vaccinate, we must be ready to trade with them when they establish FMD-freedom.

Dr. Bruce Carter, Use of Foot-and-Mouth Disease Vaccination as Part of FMD Eradication Scheme –Vaccinate to Live/Salvage: Center for Veterinary Biologics Perspective:

- This presentation discussed the North American Foot-and-Mouth Disease Vaccine Bank, the Avian Influenza Vaccine Bank, the basic biologics product licensing requirements, the types of biologics approvals, and food safety considerations of vaccination.

Dr. Richard Breitmeyer and Dr. Edward Henry, Use of Foot-and-Mouth Disease Vaccination as Part of FMD Eradication Scheme –Vaccinate to Live/Salvage: A California Perspective:

- This presentation outlined the cattle demographics of California, especially the tri-county area of Tulare, Kings and Fresno counties where there are 624 dairies with 671,000 cows (an average

1075 cows/dairy). Combined with the extensive custom heifer raising operations, this presents unique challenges for the control of a disease such as FMD.

- Operation "Aptosa" was an exercise in November 2004 to evaluate and enhance training for the California-USDA rapid response teams, to develop working relationships with cooperating agencies, and to evaluate and improve response plans. One of six rapid response teams was a vaccination RRT with a mission of the reception, storage and distribution of vaccines to private practice veterinarians along with all necessary equipment. The National Animal Health Emergency Management System Guidelines (5th draft, which is about 90% complete) were very helpful. The vaccination teams led by 40 private dairy veterinarians could vaccinate over 1 million cattle in 7-10 days. California requested that 1½-2 million doses of vaccine be delivered within 3-5 days of a confirmatory diagnosis. However, the vaccine bank could only deliver 250,000 doses seven days after diagnosis and 1 million doses total after 18 days. Therefore, a vaccination strategy needed to be developed in the midst of the exercise to determine which animals to vaccinate. Uncertainties such as regulatory issues, trade issues, and market place acceptability prevented the development of a vaccination strategy.
- A continued national dialogue is needed to overcome the issues shown in exercises such as "Aptosa". What is the next step in this national dialogue?

Old Business: None.

New Business

- The mission statement of the Committee was slightly modified by deletion of the acronym "AHM".
- One resolution, "Protocol on Interstate Movement of Wild and Exotic Animals", was recommended for deletion. The requested written report from USDA, APHIS, Veterinary Services was provided to the Committee.

General discussion: None.

Committee Session adjourned at 12:15 PM.