Terror in the Heartland:
New ideas for covering disasters that affect agriculture and health

PETER HOFHERR
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Tuesday, October 5, 2004
Why Would a Terrorist Attack Agriculture?

- Ag systems are generally less protected than other targets.
- Has the potential to cause grave economic and psychological damage to the system.
- Tools are more available and have more acceptability in the world community than biological attacks on humans.
Bioterrorism Directed Toward U. S. Agriculture Industry

- FMD is the most probable agent
- Other possible agents – TB, Brucellosis, Avian Influenza, Hog Cholera, & Exotic New Castle
- Human impact minimal – psychological, mistrust of food supply
- Devastating economic implications to livestock industry
The best time to prepare is when there is no crisis.
Players and the Plan

MDA has developed an annex to the state emergency plan for use in the event of an outbreak of animal disease.
Multi-Agency Plan

- Governor’s Office, Attorney General

- State Agencies: MDA, DNR, MDC, DHSS, MoDOT, DMH, DSS, DED

- State Law Enforcement: DPS, National Guard, Highway Patrol, SEMA, Water Patrol

- Private sector where appropriate – Doctors, Veterinarians, Counselors, etc.
Exercising the Plan

- Department of Homeland Security, in cooperation with Missouri’s State Emergency Management Agency has coordinated numerous tabletop exercises with agriculture components.

- Early this year SEMA and MDA conducted a statewide simulation of an intentional introduction of foot & mouth disease.
Additional Steps Taken by MDA to Respond to a Disease Outbreak

- Provided disease recognition training to practitioners.
- Developing annex templates for county emergency plans.
- Stage equipment to respond to an animal disease emergency.
Future Plans

- Increase Bioterrorism/FAD awareness with individuals involved in the agriculture sector.
- Increase involvement of field staff with local emergency responders.
- Increase the department’s level of response to natural disasters.
- Encourage private veterinarians to participate as volunteer responders.
- If a disease occurs, be able to respond quickly to protect the assets of the state.
“Missouri animal health officials are investigating...”
Communications Flow

FADD Evaluation

Accredited Vet in Practice or at Livestock Market

USDA Regional Veterinarian

State Veterinarian

Department Director

Local Emergency Responders
Animal Health/Livestock Org.
Commodity Groups

Communications Director

MEDIA

SEMA

Governor’s Office

Governor’s Communications Director
SEMA PIO
Health PIO
Conservation PIO
NASDA / COSDA
Questions?
Animal Health Division
573-751-3377
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Tuesday, October 5, 2004
Veterinary Speak 101
Definitions:

**Agroterrorism**

The intentional attack on agriculture infrastructures with Biological agents.

(Risk have greatly increased for an international or domestic attack.)
Definitions:

**Biosecurity**

Practices that minimize disease introduction and spread from one herd/flock to another.
Definitions:

Zoonotic Disease

A disease that can be spread from animals to humans.

Examples include…

Anthrax, Brucellosis, Tularemia, Plague, Encephalitis, Ebola and Q Fever.
More Definitions:

- **Quarantine Zone** - The total area designated for control by some regulatory agency. This zone is variable and fluid, but it is best to stay with OIE standards.

- **Infected Zone** - The area of closest proximity to the infected herd. This area has the tightest control. (1 kilometer)

- **Buffer Zone** - The area surrounding the Infected Zone. Usually try to control animal movement only. (5 kilometer)
Even More Definitions:

- **Morbidity** - The number of animals infected.
- **Mortality** - The number of animals that die.
- **FADD** - Foreign Animal Disease Diagnostician a specifically trained government veterinarian.
- **Index Herd** - The first herd or flock exhibiting symptoms in a disease outbreak.
Last, But Not Least, of the Definitions:

- **Cleaning and Disinfection** - The cleaning and disinfection of facilities, vehicles and perhaps personnel to implement biosecurity.

- **Depopulation** - In today’s scenario, the destruction and disposal of infected, and possibly exposed animals.
Types of Bioterrorism Agents

- **Human** – Smallpox, Cholera, Shigellosis
- **Zoonotic** – Anthrax, Brucellosis, Tularemia, Plague, Encephalitis, Ebola, & Q Fever
- **Animal** – FMD, Avian Influenza, New Castle, Rinderpest, Hog Cholera, Blue Tongue

**Why Zoonotic?**
Controllable, Many in nature, Animal Models – Testing/Production, Politically Legitimate to Research
Bioterrorism Pathogens For Livestock - Criteria

- Highly Infectious & Contagious (FAD)
- Good Ability to Survive in Environment
- Predictable Morbidity/Mortality
- Pathogenic for Livestock & Poultry
- Available & Easy to Acquire or Produce
- Attributable to Natural Outbreak – Deniable
- Easily Disseminated
“What happens when...”
Flow of an Animal Health Emergency

Livestock Producer → Local Veterinarian

Regulatory Veterinarian → FADD

Local Emergency Management → SEMA

Animal Control

Local Fire and Rescue

Local Law Enforcement

Other State Agencies, Health, MoDOT, Conservation, Highway Patrol, FBI, Corps

Federal Agencies, USDA, EPA, Corps
Thank you for supporting Missouri’s agriculture.