Interface of Human, Animal and Environmental Health

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What caused BSE?

- Prions?
- WWII search for alternative proteins?
- Changes in calf feeding practices?
- Pressure for higher milk production?
- European Community Ag policy?
- Global trade?
- Aliens?
How can we describe FMD?

• An animal health problem?
• A trade issue?
• An economic issue?
• An disease infectious to humans?
• A food safety problem?
• A food systems problem?
• A public health problem?
• An environmental health problem?
Animal and Plant Health Problems are extremely complex...

- Can’t completely be understood
- Demand action
- Always unanticipated/unintended consequences
- No simple “solution”
Case Study: H5N1 and eggs

- High pathology poultry disease
- Zoonosis (affects people)
  - Primarily through handling affected poultry
- Trade issue/economic concerns
  - Food system issue
- Wildlife implications
  - Some species unaffected carriers
Egg industry in US

• Egg production concentrated near sources of feed
• Large production facilities designed to protect bird’s health and food safety
• “Just-in-time” supply chains to assure fresh eggs everywhere in the nation
Addressing H5N1 (historical)

- Quarantine and depopulate affected and exposed premises
- Stop all movement of poultry and poultry products in surrounding area
- Initiate aggressive surveillance until able to prove that disease no longer exists
The H5N1 conundrum

If implement traditional response

• Disrupt food supply
• Create public impression of food safety issue
  – No eggs must mean dangerous!
• Destroy egg industry and disrupt local communities
  – Re-establishing production facilities takes years
Addressing Animal and Plant Health Concerns in the 21st Century

Change the paradigm…
From ‘solving problem’ to improving the whole situation
Must SIMULTANEOUSLY address

- animal or plant health problems
- trade issues
- economic issues
- food systems problems
- public health problems
- environmental health problems
Need strategic public-private partnerships

- Brings broader perspective
- Creates more buy-in
- Better anticipate consequences and plan for them
- Side benefit of more effective collaborations regardless of the issue
Need to build shared leadership

- Shared vision and strategic thinking
- ‘One Health’ approach
- Systems thinking
- Science-based – there is NO zero risk
- Improved communication
- Ability to work across ‘boundaries’
- Commitment to incremental progress