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Interface of Human,
Animal and Environmental Health

William D. Hueston

Addressing Animal and Plant Health Concerns in the 21st Century

The Interface of Human, Animal and Environmental Health

Will Hueston

*Global Initiative for Food Systems
Leadership*

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