Nature and Scope of Recovery

• HSPD-9 is ambiguous regarding recovery and response
  – “Recovery” in document may be more or less than true recovery (could be including mitigation, etc.)
• Recovery is not a return to the status quo!
  – Return may not be possible or even desirable
    • For instance, crop production practices might improve, and become even better after an introduction
• Recovery needs to be flexible and evolving
  – Will depend on crop/pathogen, region involved, etc.
• Need to consider all factors – economic, sociological,…
• Capacity of the agricultural industry to respond to, or deal with, the problem (i.e., to minimize the disruption from the pathogen introduction)

Recovery: what it means

• Maintain productivity
• Minimize costs (minimize inputs and labor)
  – Great need for cost-benefit analysis (not done yet, in general)
• Minimize negative economic consequences
• Difficult to draws lines in the continuum:
  – Detection/diagnosis…. to integrated disease management
  – Timing is the key: when the disease is discovered
• There are levels or scales to recovery
  – None (nothing can be done, economically)
  – Better management than before
  – Local (individual grower), regional, national
Assumptions and background

• Recovery is in terms of **Food, Feed, Fiber, and Nutritional Security** for the U.S. (not necessarily for individual growers or regions)
  – Food availability for consumption and export
• No change in GDP (at least for the agricultural sector)
  – But there could be changes in crops grown in affected regions
• Vitality of agricultural communities
  – Maintaining agricultural sector economic health after outbreak
  – Industry to be as resilient and robust as possible
• Vet. Model does not directly pertain for crop diseases
• The “bomb” model of an outbreak does not pertain for crop diseases

Overly simplistic parts of HSPD-9

Single-season recovery is generally not achievable
  – Will depend greatly on the crop/pathogen
  – Logistics of bulking up seed supply would be unrealistic
  – Resistant varieties may not be known
    • Breeding takes time (even for transgenics)
  – Undesirable quality traits linked for resistance
  – Resistant crop varieties may not be best choice for recovery or management
• Many crops are not grown from seeds
  – Perennial propagation, vegetative propagation, etc.
• More research is needed now for becoming better prepared, so that realistic recovery plans can be developed
Response Plans

- Cannot deal with every possible pathogen-host combination of potential concern
- Justifiable for Select Agents
- Difference of opinion regarding the need for many more Recovery Plans for specific pathogen-host combinations
- Maybe Omnibus Plans for certain crops, covering many pathogens
  - A lot less detail on specifics, but can focus on the major disease issues of potential concern for crops
  - The large number of pathogen species and crop species (and varieties) makes this a more reasonable approach
- Coordination is a key for all Response Plans