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