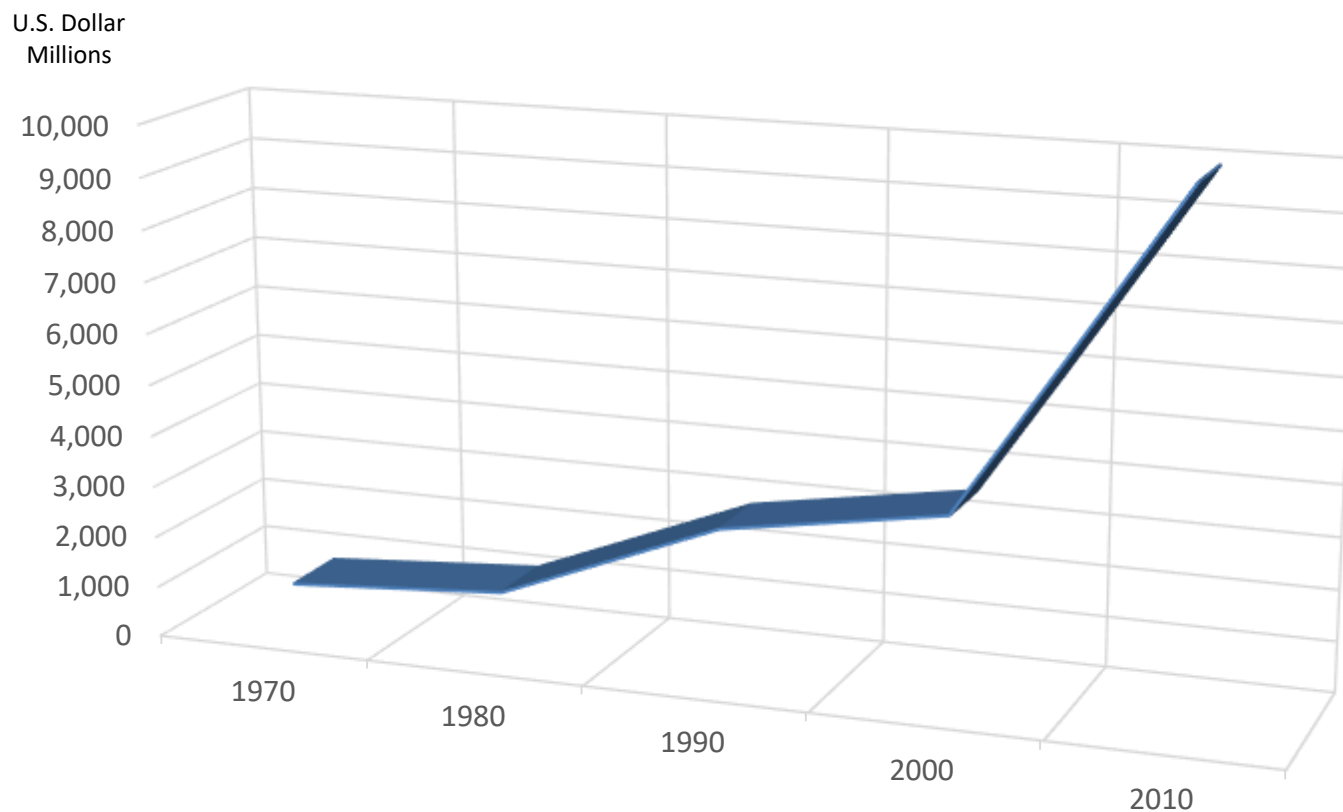


Cultivating a New Approach

Angela McMellen Brannigan
Plant Protection and Quarantine



The Rapid Growth of Seed Trade



A Complicated Trade Model



1. Breeding parental lines: Europe State 1
2. Production of basic seeds: Europe State 2
3. Treatment and manufacture of basic seeds: Europe state 1
4. Production of hybrid seeds: China
5. Treatment and manufacture of commercial seeds: Europe state 1
6. Commercial packaging: USA
7. Final market: Mexico

**Adapted from a presentation by Ric Dunkle, PPQ Seed Summit, 2014*

National Seed Health System

APHIS' Current Approach to Alternative Delivery Systems



National Seed Health System (NSHS)

- Authorized under 7 CFR 353.8 in July 2001
- Accreditation of non-governmental entities
- Supports export certification activities



NSHS Accreditations

- Seed Health Testing
- Seed Sampling for Seed Health Testing
- Visual Inspection of Seed for Phytosanitary Certificate
- Phytosanitary Field Inspection

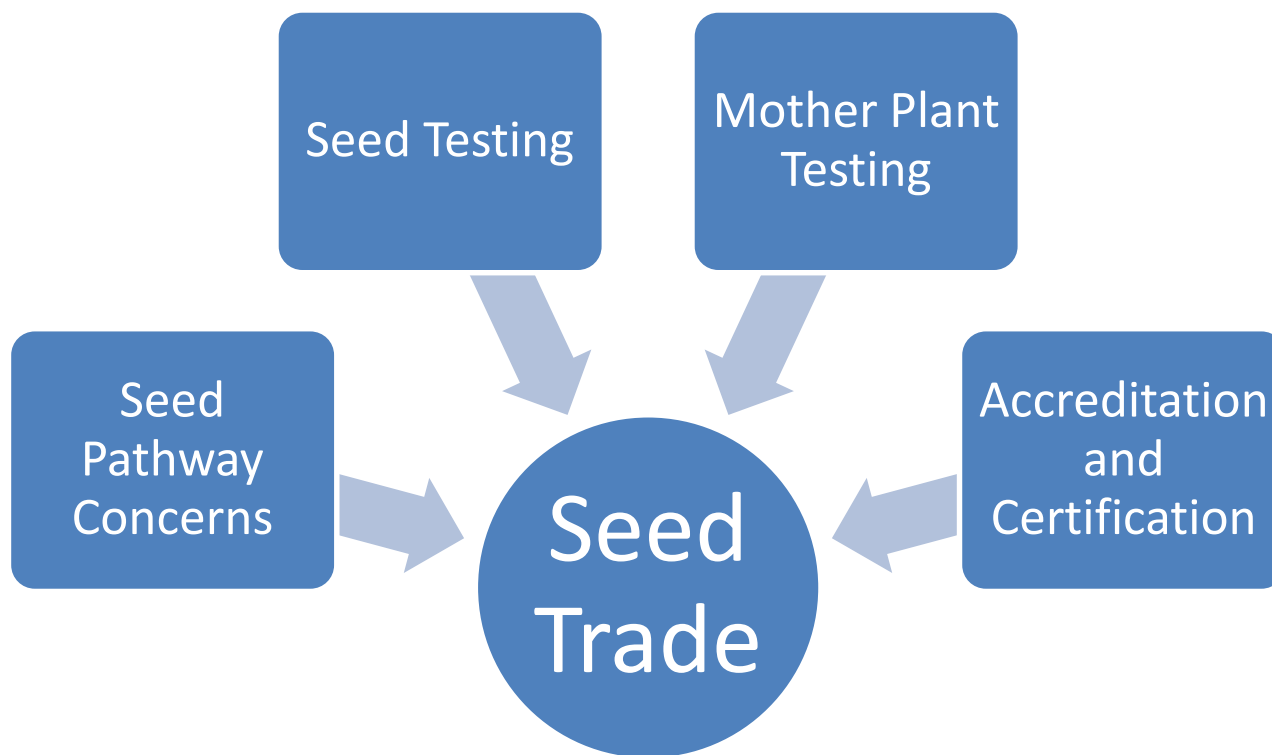


National Seed Health Accreditation Pilot Program

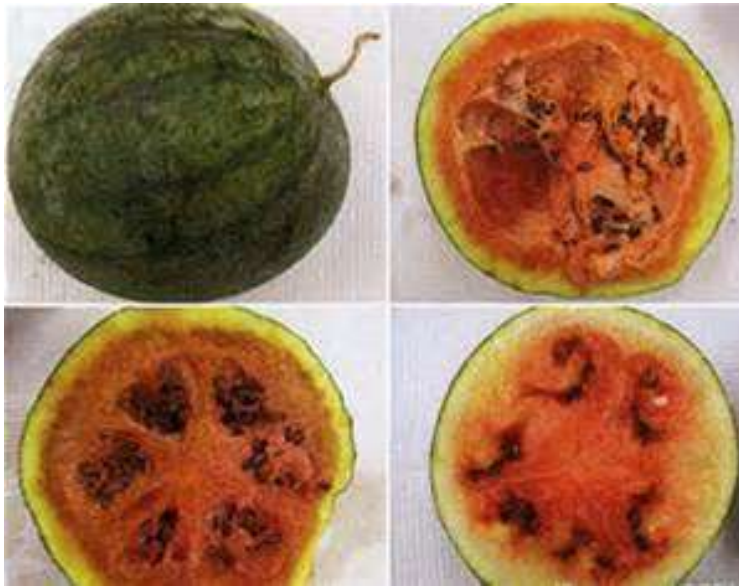
APHIS' Pilot for Imported Seed



Seed Trade Trends



Growing Concerns: Seed Transmitted Disease



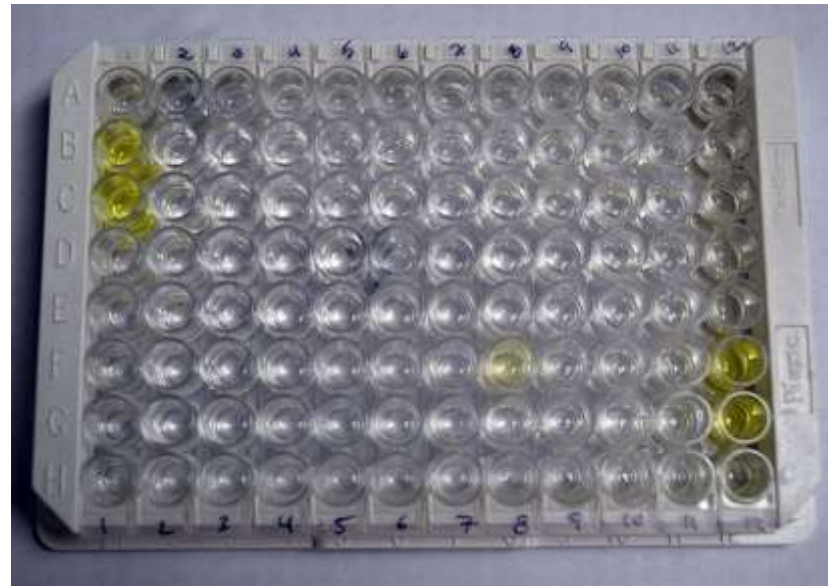
What is NSHAPP?

- National Seed Health Accreditation Pilot Program (NSHAPP)
- Testing a new model for mitigating risk of imported seed
- Coordinated effort between the Iowa State University and APHIS
- Industry participants voluntarily self-test imported seed and report results to APHIS
- Initial target – CGMMV in cucumbers, melons, watermelon



NSHAPP Summary

- Seven enrolled companies
- Five positive lots (India and China)
- 3,983 lots tested as of October 1



NSHAPP Challenges

- Encouraging industry participation
 - What is the incentive to participate?
- Working within the different business models of the participating companies
- Focus is only on seed testing



NSHAPP Successes

- Detected and destroyed positive seed lots
- Increased collaboration with industry
- Increased knowledge of seed business models within APHIS
- Creating ideas for future seed work



Regulatory Framework for Seed Health (ReFreSH)

APHIS' Vision for Future Alternative Delivery Systems for Seed Health



A New Approach

- **Regulatory Framework for Seed Health (ReFreSH)**
- Risk-, science-based systems approach
- Work within current seed trade model
- Leverage industry best practices
- Promote global adoption of seed trade framework



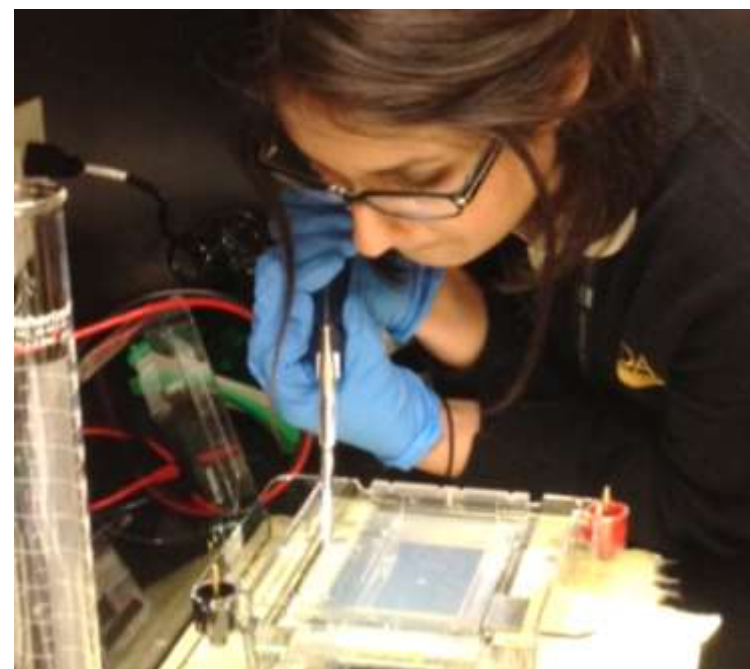
A Global Seed Conversation

- NPPOs grappling with seed trade risk
- Ongoing work to develop an international seed movement standard
- Opportunity for NPPOs and seed industry to work together to develop a new model



Challenges of New Model

- How do we develop a truly global seed trade regulatory system?
- How do we as an NPPO setup a system outside of our control?
- How will we build a system based on trust, but with verification built in?
- What role will molecular diagnostics play?



The Impact of Molecular Diagnostics: A Catch 22?

- Greater ability to detect, identify pathogens and safeguard agriculture
- Application of technology to regulatory problem resolution is not straightforward

Questions?

