ReFreSH
A Regulatory Framework for Seed Health

National Plant Board, Annual Meeting 2018

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Regulating Seed Trade in the United States

• Seed was long regarded by regulators as a relatively low risk pathway so seed moved in trade with minimal import requirements

• Currently, most seed for planting imported into the United States requires only a phytosanitary certificate from the country of origin and port of entry inspection

• Phytosanitary certification on consignment by consignment basis
Changing perception

• 2013: Detection of *Cucumber green mottle mosaic virus* in California

• 2014: USDA-organized Seed Summit in Riverdale, MD

• National Seed Health Coordinator: Ed Podleckis

Source: CDFA
NSHAPP

• National Seed Health Accreditation Pilot Program
• Built in collaboration with the seed industry
• Framework for a voluntary system of testing imported seed for pathogens of phytosanitary concern: focus CGMMV
NSHAPP

• The target pest CGMMV
• Imported cucumber, melon, and watermelon seeds are tested
• Program administered through Iowa State University
• Implemented in 2015
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<th>SAMPLES POSITIVE</th>
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Challenges of Regulating Seed Trade

- Increasingly global nature of seed industry
- Increasing volume and complexity
- Thousands of pests potentially involved
- Increasing demand for documents and declarations
- Certifications on a consignment basis straining NPPO resources
A New Approach - Regulatory Framework for Seed Health (ReFreSH)

• Risk-, science-based systems approach
• Aims to develop an effective and more efficient program for managing phytosanitary risk associated with international seed movements
• Leverage industry best practices
• Promote global adoption of a harmonized system
A New Approach - Regulatory Framework for Seed Health (ReFreSH)

• Goals:
  • Shift the current focus of consignment by consignment inspection and testing to a system where accreditation of producers and production processes forms the basis for phytosanitary certification
  • Accommodate all seed sectors (vegetable, cereal, row crop, farm and lawn, flower) and all sizes of companies
ReFreSH- How it could work

- Seed production system approved/accredited by NPPO of exporting country
- NPPO of importing country accepts accreditations as equivalent to phytosanitary certification of individual seed consignments
- Accreditation is basis for issuing phytosanitary certificates
- Compliance assured by quality management systems/audits
Designing a P-HACCP System

- Identify critical control points
- Identify mitigation measures
- Establish performance standards
- Establish monitoring procedures
- Establish corrective measures
- Establish record requirements
Buckets (aka Critical Control Points)

- **Pre-planting:** Site Selection & Preparation
- **Pre-planting:** Plant & Seed Inputs
- **Production:** Pre-harvest
- **Production:** Seed Harvest
- **Distribution & Transport**
- **Postharvest:** Seed Quality Testing
- **Postharvest:** Handling & Storage
- **Postharvest:** Conditioning & Treatment
A Closer Look

- **Accredit testing facilities / certification programs**
- **Certify transplant facilities**

**Pre-planting: Plant & Seed Inputs**
- **Use tested / certified seed**
- **Transplant sanitation**
- **Use resistant or less susceptible cultivars**
- **Seed treatments**

**Phytosanitary status of seed / transplants**
- **Audit, review of records and documentation**
- **Laboratory ring tested**

**Regulatory Activity**
- **Critical Control Point**
- **Mitigation / Best Practice**
- **Hazard**
- **Verification**
Feedback

• Flexibility
  • To accommodate all sizes of entities, third party/contract producers and brokers

• Implementation issues
  • For initial pilots: limited participants/commodities
  • Until widely accepted, may require extra, even redundant work

• “Small” issues
  • Carrot vs. stick to encourage small entity participation; outreach
  • Small lots of seed
Beyond ReFreSH

Simultaneous efforts across the globe

• U.S.:
  ▪ ReFreSH

• Australia:
  ▪ Global Integrated System of Seed Production

• ISF:
  ▪ Systems Approach Working Group / Disease Prevention Program

• France
  ▪ Purported to be developing systems approach

• COSAVE
International forums

Two significant international meetings on systems approaches

• ISF- sponsored- Rome, April 2018
  ▪ Participants: One NPPO representative, one national seed association representative from each country
  ▪ Countries: Australia, Chile, Netherlands, South Africa, U.S.

• Australia DAWR International Clean Seeds Pathway
  ▪ Brisbane, June 2018
  ▪ Participants: NPPO and industry representatives from at least 10 countries from Europe, the Americas, Asia and Oceania
International “consensus”

Ultimate goals:

• Global, multi-lateral acceptance and implementation of such a Systems Approach by NPPOs and industry

• Shift current focus of consignment by consignment inspection and testing to a system where accreditation of production processes forms the basis for phytosanitary certification

• Accommodate all seed sectors (vegetable, cereal, row crop, farm and lawn, flower) and all sizes of companies
International “consensus”

Next steps:

• Most viable path to multilateral acceptance is through the IPPC probably as ISPM 38 annex

• As ReFreSH most developed, it can serve as model and NAPPO has agreed to sponsor IPPC proposal
What would the annex contain?

• Detailed inventory of seed-focused risk management measures and risk-reducing production practices
• General framework for systems approach
• Guidance on accreditation and audits
Benefits

Systems approaches create the opportunity for innovation and flexibility in managing pest risk

• For industry:
  • Faster release of product at import
  • Reduced operational cost
  • Harmonized import requirements

• For regulators:
  • Better overall understanding of the phytosanitary status of seed production
  • Greater efficiency and transparency
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?
• How do we achieve necessary multilateral acceptance?
Next Steps

• Complete identifying mitigations and corresponding regulatory oversight activities.
• Develop criteria for accreditation under ReFreSH
• Complete a description of the ReFreSH system in FY 2018
• Explore harmonization/potential pilots
  • Quads, ISF
  • IPPC Standards
THANK YOU!