

# Horticultural Industry Partnerships—Challenges and Success Stories

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# American Horticulture

- AmericanHort's mission is to unite, promote, and advance the horticulture industry through advocacy, collaboration, connectivity, education, market development, and research.
- The horticulture industry's production, wholesale, retail, and landscape service components have annual sales of \$163 billion, and sustain over 1,150,000 full- and part-time jobs.
- Specialty crops represent roughly half of the value of American agricultural crop production. Nursery and greenhouse crops represent about one-third of the total farmgate value of specialty crops.

# “Victim and Vector”

- Horticultural crops (and landscapes and forests) extremely vulnerable to introduced pests, pathogens
- Imported plants can be one (not the only) vector for pest introduction
- The industry takes the issue seriously



Photograph by Michael Bohne

# Plant Trade in Context

- In past, most international trade involved small quantities for new variety introduction
- That's changing. Ex: vegetative annual cuttings
- Pest by pest regulation
- Most taxa allowed unless specifically restricted or prohibited
- Preclearance or post-entry quarantine in few cases
- Heavy reliance on inspection upon arrival
- Regulatory framework evolving (Quarantine 37)

# *“It’s Your Wake-up Call!”*

- *Phytophthora ramorum* – science catches up to reality, links tree death, nursery pathogen
- Millions in losses, compliance costs
- Response elements:
  - Traditional quarantine
  - Research – NORS-DUC established
  - Recovery protocols
  - Best practices
  - Pilot ‘systems approaches’
    - (e.g., GAIP in Oregon)





**Voluntary Industry Best Management  
Practices for *Phytophthora ramorum*  
Introduction or Establishment in  
Nursery Operations - Version 1.0**

Approved by HRI Industry P. ramorum Committee – March 28, 2008

# “An International Incident...”

- *Ralstonia solanacearum* Race 3 Biovar 2 (RsR3B2) is bacterial pathogen of concern to geranium... and potato!
- Introduction on cutting imports spurred response plan
- Rigorous systems approach considers facility, propagation, sanitation, water, handling, etc.



# And Another...



- Boxwood Blight fungal pathogen discovered in fall of 2011
- Boxwood is major high value nursery crop and iconic landscape plant
- Threat of widespread panic, disruption
- Industry working group, scientists and regulators developed research needs, best management practices, model compliance agreements

# Is There a Better Way?



# Our Goals

- 21<sup>st</sup> Century plant health system
- Broad-based “integrated measures” / systems approaches that conform with int’l standards
- Focus on critical control points, best management practices, audits
- USDA-APHIS, National Plant Board, Industry collaboration
- Voluntary Standard
- Potentially applicable for international, domestic

# Plant Production Certification: Cutting Through the Jargon

## Integrated Measures

Actions taken during the production **process**

## Systems Approach

Using at least **two independent measures**,  
which together appropriately manage risk.

# Cutting Through the Jargon

## Critical Control Point (CCPs)

Specific steps in the process where procedures can be applied to most efficiently manage risk – The “**What.**” Also, “hazard” points.

## Best Management Practices (BMPs)

Actions taken to address the concerns raised by a critical control point – The “**How.**”

1

## Standard

To Participate You  
Must Address XYZ

2

## Application for Designation

To Participate We Will  
Address XYZ

3

## Pest Management Plan (Operation Manual)

Describes How We Will  
Address XYZ

4

## Records

Confirm That We Are  
Doing XYZ as  
Described in PMP

5

## Audits

Evaluates Records  
and Confirms that  
PMP is Being Adhered  
to.

# Cutting Through the Jargon

It all boils down to RISK MANAGEMENT

- Prevent problems coming in
- Monitor crops for issues
- Accurately diagnose pests/diseases
- Treat problems as appropriate
- Avoid shipping pests/diseases



# Voluntary Systems Approach Certification

- Dependent on complexity of operation – Identify specific CCPs – Grower chooses BMP's (toolbox).
- Grower and inspectors/auditors work together as the operation develops its unique management plan.
- Grower keeps records, which are periodically audited by inspectors.
- Grower has significantly more shipping flexibility and saves money on phytosanitary certificates.

# Our Efforts 2012-2013

- Draft Certification Standard that meets International Standards (ISPM-36 and RSPM-24)
- Draft CCP/BMP Matrix (i.e., toolbox)

A	B	C	D
Component, site, or stage of production	Target pests or pathogens	Contamination Hazard	BMP-suggested by ANLA/SAF working group
water management	waterborne pathogens	infested surface irrigation water	Disinfest irrigation water using effective methods
water management	waterborne pathogens, fungus gnats, moth flies, shoreflies, molluscs, nematodes	splash dispersal of pathogens; pest damage from standing water	Prevent standing water by not overwatering and correcting drainage problems, or by raising containers off the ground.
water management	waterborne pathogens	Recycled or recaptured water	Disinfest recycled and recaptured water using effective methods. Note; runoff from production may be regulated.
Site selection and preparation	waterborne pathogens, fungus gnats, moth flies, shoreflies, molluscs	Splash dispersal of pathogens; damage from standing water	Facilities constructed to drain well and avoid standing water.
Site selection and preparation	waterborne pathogens, fungus gnats, moth flies, shoreflies, molluscs	Splash dispersal of pathogens; damage from standing water	Roads and pathways should be properly graded to allow drainage and avoid standing water. Pavement, gravel or other impermeable surfaces may also help prevent standing water
Site maintenance	waterborne pathogens, fungus gnats, moth flies, shoreflies, molluscs, nematodes	If standing water persists, introduction of unwanted pests increases	Address standing water by improving drainage, using gravel or impervious water barriers or raising plants off of floor.
plant propagation - all	all pests and pathogens	irrigation	Irrigate so as to minimize splashing and periods of leaf wetness. Use a water source that does not contain plant

# Related Efforts (e.g., CA)



# Key Take-Home Messages

- Status quo is neither stellar nor sustainable
- Solutions must be practical, “speed of business”
- Farm Bill has been major tool
  - Horticulture Title, pest and disease and block grant funds
  - NORS-DUC
- USDA-APHIS engagement on international stage has been, will be critical (NAPPO, IPPC, partners)
- Fine line with respect to trade rules, obligations
- Legal options (e.g. Controlled Import Permits, CIPs) are part of solution



