



Eastern Plant Board
93rd Annual Meeting

Proceedings

Hilton

Mystic, CT

April 9-12, 2018

Eastern Plant Board
93rd ANNUAL MEETING AGENDA

Hilton Hotel
 20 Coogan Boulevard
 Mystic, Connecticut, 06355

MONDAY
 April 9, 2018

Time	Topic
	Travel
5:00 – 7:00 PM	Registration (Schooner Foyer)
7:00 –9:00 PM	Reception (Cutter)
	Hospitality / Discussion Time – Soundings

TUESDAY
 April 10, 2018

Time	Topic
7:00 – 8:00 AM	Breakfast – Schooner Foyer
8:00 – 8:15 AM	Housekeeping Announcements & Welcome
8:15 – 10:00 AM	Discussion – EPB Members Only – Schooner I
8:15 – 10:00 AM	APHIS PPQ Meeting – PPQ lead –Schooner III
8:15 – 10:00 AM	CBP Meeting – CBP lead- Schooner II
8:15 – 10:00 AM	HIS Meeting - Clipper II
8:15 – 10:00 AM	CAPS Meeting –Clipper III
10:00 – 10:30 AM	~ Break ~
10:30 AM – 12:00 PM	EPB Business Meeting – EPB Members Only - Schooner I
10:30 AM – 12:00 PM	APHIS PPQ Meeting – Schooner III
10:30 AM – 12:00 PM	CBP Meeting, HIS, CAPS Meetings – Schooner II, Clipper II, Clipper III resp.
12:00 – 1:00 PM	Lunch - Cutter
	Session Moderator: Gary Fish, Maine Department of Agriculture, Conservation & Forestry - Schooner
1:00 – 1:30 PM	<p>Welcome, Chris Logue, President Eastern Plant Board, SPRO New York Department of Agriculture and Markets</p> <p>State Welcome, Kirby C. Stafford, CT Agricultural Experiment Station, Chief Scientist, Entomology Dept. and State Entomologist</p> <p>Notes: CT is the 3rd smallest state; 4th most urbanized state with 30% of land urban; 16th most forested state; lots of urban forests, 1.8 million acres of forest cover, 29 state forests, forest cover is primarily oak-hickory. Predictions of climate change will make tree cover even more important. Ranks 3rd in New England for farm sales. Ag industry is nursery, greenhouses, sod production, dairy. There are 37 licensed wineries, and the state produces 20,000 gallons of maple syrup. Fruit and nut farming makes up about 50% of agrotourism; have 43 poultry and egg producers.</p>

1:30 – 2:30 PM

Spotted lanternfly – survey and protocols: Panel presentation

- *Dana Rhodes, Pennsylvania Department of Agriculture*

Notes: Survey is a multi-pronged tool. There is a formal regulatory survey. Also, inspectors are required to do survey of 5 *Ailanthus* trees at the locations they visit. This survey helps have confidence in negative data across the state. See a concentration of SLF in the southeast corner. Use Outreach as a survey method. SLF is readily identifiable and can use the public in survey. High level of accuracy, but leopard moth is the insect most frequently misidentified as SLF.

- *Chris Logue, New York Department of Agriculture and Markets*

Notes: Different perspective. Do not have known established populations of SLF. Had a regulatory incident in Delaware County, NY with a single dead SLF in a load of pill bottles. Pharmaceutical industry is highly regulated. Some concern with the detection of this in such a regulated environment – what is happening in an environment with less oversight? Using Unified Command structure with DEC – approach: Develop response plan, targeted survey of commodities and trucks, and outreach.

- *Faith Kuehn, Delaware Department of Agriculture*

Notes: Had received stone from the PA quarantine area as identified in a trace forward effort. Have been surveying that site. Know from VA's experience that populations may be below detection threshold. Had a photo submitted of a dead SLF in DE. Found a dead female SLF was submitted for DNA analysis, and found to be consistent with SLF from the PA infestation – supports that this is from the same initial introduction as PA. A challenge with SLF is that it is such a good hitchhiker. On outreach material, using #hitchhikerbug. Another photo submitted of an SLF on a heritage tall ship that stopped in DE before heading to MD. Emphasizing outreach. Have surveyed 174 sites, haven't had a hit yet on a SLF population. Have revised a fact sheet for SLF. Will have information posted on the videoboard at the local minor league baseball stadium during games.

- *Joe Zoltowski, New Jersey Department of Agriculture*

Notes: No known established populations, 3 regulatory incidents: dead adult SLF found in a car, 1 in a box of apples at a retail location, eggs on a cut Doug fir Christmas tree from the quarantine area, nymphs hatched out in a home. Worked with USDA to mitigate the incident. Focusing on the effects in the travel corridor. Looking for life stages on *Ailanthus*, have a response plan. Lots of outreach because of the value of public in detections, making handouts for each commodity group, have established a hotline, and an email account to which pictures can be submitted.

- *Kim Rice, Maryland Department of Agriculture*

Notes: Located between PA and VA, so a lot of interest. Have a website, pest alert, outreach material; plan on hiring contractuels to help with survey work. Survey this season, plan to focus on the 3 counties that border PA. Key part is outreach: presentations to industry groups, media interviews. As it is an easily identified pest, want to work with groups like DOT and other partners.

- *John Crowe, USDA APHIS PPQ* [pdf]
- *Open discussion*

Time	Topic
2:30 – 3:00 PM	<p>Pathogen Update Speed Round</p> <ul style="list-style-type: none"> • <i>P. ramorum</i> Betsy Randall-Schadel, USDA APHIS PPQ [pdf] • Oak wilt Chris Logue, New York Department of Agriculture and Markets <p>Notes: First NY find in Glenville in 2008. Two local residents with science backgrounds submitted multiple samples for diagnosis for oak wilt. Lots of negative results. Finally got a positive result. Leaf out occurring naturally, and then leaves would drop following expansion. This has primarily been addressed as a forest health issue by DEC rather than as a regulatory issue by NY Ag & Markets. Response has included tree removals, root pruning, fungicide treatments. Have also found in multiple locations in Suffolk County, as well as in Brooklyn. Seems to be sporadic in location, and contained. Not certain how it is moving. Work, including by the Cornell Diagnostic lab, is continuing on testing and sampling procedure. It is a challenging pathogen to study and understand.</p> <ul style="list-style-type: none"> • CWR Vicki Smith, The Connecticut Agriculture Experiment Station <p>Notes: In 2008, CT had a large problem with CWR. Regulatory protocol requires destruction when this disease is found, but the industry regards it as a quality rather than regulatory pest. In 2012, there was a CWR summit about what to do. Challenge is that this is a pathogen which is impacting industry simply because it is a quarantine pest. In Feb. 2018, APHIS completed an economic analysis of CWR program and is planning to meet with PPQ management team as to next steps.</p> <ul style="list-style-type: none"> • Dickeya Ann Gibbs, Maine Department of Agriculture, Conservation & Forestry <p>Notes: No states are actually regulating <i>Dickeya</i>, but many have tolerance for black leg. In 2017 ME field inspections only had one lot over the tolerances for black leg and it was removed from the certification program. Two additional tested lots were within tolerances, but higher than growers wanted, so growers voluntarily removed them from the certification program. Still testing for blackleg, but incidence is decreasing. In 2016, there was a 23% positive rate, in 2017 that decreased to ~6%. Maine Coop. Ext. hosted a research and management program on <i>Dickeya</i> and soft rot of potatoes. Europe has been responding to <i>Dickeya</i> for decades, and experts were invited to the program. Able to provide a long term perspective. Highlights are that a testing protocol has been standardized, labs are working together, and conditions need to be warm (80 F +) with sandy soils for symptoms to express. It is difficult to model spread. It is a bad idea to plant or harvest in wet conditions and a good idea to avoid surface irrigation. It is a challenging pest to regulate, and should be regulated at the genus rather than species level. Need to be able to collect more real world data from growers. There is a need for adequate training opportunities for staff in seed certification programs. NPB sponsored a training opportunity in WI in 2017 that had a field component and a lab component. The training was funded through the Farm Bill, and participants came from several states.</p>
3:00 - 3:15 PM	~ Break ~

3:15 – 3:45 PM	<p>SANC / GCP / BMP updates: Taking BMP’s and verification systems to the next level</p> <ul style="list-style-type: none"> • <i>Dana Rhodes, Pennsylvania Department of Agriculture</i> [pdf] • <i>Laney Campbell, USDA APHIS PPQ</i> [pdf]
3:45 – 4:15 PM	<p>Hot topics: Pollinator Issues, emcee Vicki Smith (victoria.smith@ct.gov) to submit photos / discussion points</p> <p><i>Each state should contribute a couple of hot topics about pollinators in their states</i></p> <p>Notes:</p> <ul style="list-style-type: none"> • ME’s DOT website has a Design and Propagation manual about Maine native plants for roadside restoration. Highly recommended. There has been an increase in incidence of American foulbrood. There are training programs to train veterinarians to do apiary inspections in order to be able to dispense antibiotics. Concerned about native pollinators including the rusty patched bumblebee. Yellow banded bumblebees seem to be making a comeback. • CT’s pollinator act treats homeowner applications of neo-nics as restricted use. Requires all beekeepers to register, since the 1920’s. Get pushback from beekeepers, but accentuate the positive – disease protection factor, knowledge about use of pesticides, land preservation. • MA legislature has proposed a neo-nic bill. Apiary registration is mandatory. Mostly hobbyists in the state only a few that do commercial pollinator services. Lots of calls about bee kill and pesticide applications. Apiary inspector worked with Pesticide inspectors to vet calls and establish a protocol to determine which calls should be elevated to respond to. About half of calls can be determined to not be related to pesticide applications. For calls where there is a concern, the apiary inspector goes with the pesticide inspector. • DE has had challenges with beekeepers not wanting to register. Recently sent letter to beekeepers relating to need to register and consequences of not registering. Have a grant proposal to support training for beekeepers and those interested in beekeeping. Putting together a pollinator story map for DE State Fair. Have a lot of pollinator habitat in the state, worked with a poultry farmer on a SARE grant to put in pollinator plantings between poultry houses. • NY has several apiary / beekeeping related programs. Have seen more American foulbrood. Used to only see a few cases a year, recently up to 72, with majority reported by the beekeeper. Usually when do the inspection, find additional colonies on the premises with American foulbrood. Beekeepers are concerned about American foulbrood, so they want to register their apiaries. Cornell has a program for improving beekeeping, working with about 35 beekeepers. After inspect hives and send samples for testing, work with beekeepers to increase or improve upon their best management practices. Beekeepers may not be caught up to new techniques and technologies to keep bees alive and need training to reduce the number of colonies that die.

4:15 – 5:00 PM	<p>Hemp Sampler: A panel discussion on hemp products being prepared for market</p> <ul style="list-style-type: none"> • <i>Joe Zoltowski, New Jersey Department of Agriculture</i> Notes: Have a program on paper, but does not currently have an active industrial hemp program, as such, no products are available. • <i>Chris Logue, New York Department of Agriculture and Markets</i> Notes: Does have an IH program, in year 3. In first year only 10 licenses issued and limited to research institutions. By year 3, the program is more liberal. NY does allow for CBD products. There is an interesting regulatory discrimination being made between medicinal marijuana and industrial hemp CBD products. Lots of interesting research trials into industrial hemp products like protein powders, natural-fiber based plastics, battery technologies. NY does not allow for vaping of CBD oils in e-cigarettes. • <i>Mike Arnold, West Virginia Department of Agriculture</i> Notes: In 4th year, but 3rd growing season for industrial hemp. In first year, had 10 approved licenses, in 2nd year there were 20, in 3rd year have 1,394 acres with industrial hemp production. There are 4 import permits to bring in industrial hemp seed from outside of the country. As far as products, initially it was fibers, textiles, hempcrete, etc. A few growers have been stockpiling their stems for fibers because the market has not materialized. Now, a focus is on seeds in order to make topicals. As this continues, it becomes more complicated, and there is the potential for it to become heavily regulated, at which point the profitability will diminish. • <i>Gary Fish, Maine Department of Agriculture, Conservation & Forestry [pdf]</i>
	Dinner On Your Own
	Hospitality / Discussion Time Hospitality Room Hosted by CAPS - Soundings

WEDNESDAY

April 11, 2018

Time	Topic
7:00 – 8:00 AM	Breakfast – Schooner Foyer
Session Moderator: Joe Zoltowski, New Jersey Department of Agriculture - Schooner	
8:00 – 8:30 AM	View from the National Plant Board [pdf] <i>Ann Gibbs – NPB President, Director, Animal & Plant Health Division, Maine Department of Agriculture, Conservation & Forestry</i>
8:30 – 9:00 AM	View from the PPQ Field Operations, Raleigh Office [pdf] <i>Carlos Martinez, USDA APHIS PPQ</i>
9:00 – 9:30 AM	CBP Update [pdf] <i>Mikel Tookes, CBP Agriculture Programs and Trade Liaison Deputy Executive Director</i>
9:30 – 10:00 AM	Asian longhorned beetle update [pdf] <i>Ryan Vazquez, USDA APHIS PPQ</i>
10:00 – 10:30 AM	~ Break ~

10:30 – 11:00 AM	Emerald ash borer in aftermath forests, Nate Siegert, USDA Forest Service [pdf]
11:00 – 11:45 AM	<p>EAB deregulation, perspectives, and firewood BMPs</p> <ul style="list-style-type: none"> • Status of federal de-regulation effort <i>Ben Slager, USDA APHIS PPQ [pdf]</i> • Nothing ventured, nothing gained – a New York perspective <i>Chris Logue, New York Department of Agriculture and Markets [rfh]</i> <p>Notes: NY Dept. Ag & Markets shares authority in the state with the NY DEC. Found EAB in 2009. Between 2009-2014 there was a series of stepwise quarantines based on known populations of EAB. In 2012, the quarantine area extended to the NY State thruway. Within that quarantine area, some portions were infested; some were not. Pressure from municipalities within the quarantine area but without known populations of EAB. In 2015, went to a federal statewide-EAB quarantine, and within the state were regulating 13 discrete EAB zones. In 2016, spread of EAB made this 7 regulated zones. This approach was worth trying because it helped build relationships with NY DEC, with the forest products industry in relation to invasive species, it may have given some municipalities time to procure urban forestry resources, and it gave an opportunity to try a different approach, which with a different pest might be a really good approach. EAB, however, was not necessarily a good fit to be regulated this way because: 1) needed the tighter quarantine approach earlier in the invasion; 2) EAB's pest profile was not a good fit. Currently discussing de-regulation of EAB in NY.</p> <ul style="list-style-type: none"> • Thoughts from a state without a detection <i>Gary Fish, Maine Department of Agriculture, Conservation & Forestry</i> <p>Notes: In Maine there is some concern about the federal proposal to de-regulate EAB, particularly among some of the native tribes who have significant cultural and environmental resources at risk. The Aroostook band of Micmacs have reached out to Terry Bourgoin with USDA APHIS about their concerns. Maine has stepped up their pre-planning for EAB following the VT find and the expansion of the NH EAB quarantine area, as there is increased Maine border that adjoins an EAB-quarantined area. Planning for an ICS tabletop exercise with the relevant agencies in order to have roles well-defined. Important to work with the tribes. Increasing concerns about the movement of firewood. Interested in a unified kiln treatment and to see if everyone is regulating firewood in the same way. Some discussion among some of the tribes about potentially suing the USDA should EAB be de-regulated.</p> <ul style="list-style-type: none"> • Firewood after EAB deregulation, BMP's for firewood movement <i>Nate Siegert, USDA Forest Service [pdf]</i>
11:45 AM – 12:00 PM	<p>Specialty crops, pest burdens, new pest outlook: European cherry fruit fly, spotted wing drosophila, and other orphaned pests. What's important to states? Discussion emcee Dana Rhodes (danrhodes@pa.gov) for photos or discussion points</p> <p><i>States should come prepared to contribute a couple of hot topics / concerns about specialty crop pests in their states.</i></p> <p>Notes: Pests primarily submitted by states for concern include spotted wing drosophila and European cherry fruit fly as being new pests of specialty crops and which the regulatory response and the perceived risk by the industry do not necessarily appear to be in accordance. Each new pest introduction is different and it can be a challenge to respond similarly to every pest situation. The decision is driven by the questions: 1) can we regulate; 2) are there tools available (i.e. for detection, control, management, etc.); 3) will use of the tools be acceptable? There needs to be communication across cooperators, which the IRC addresses in part, by providing a better opportunity to consult and engage with state partners through this process in order to drive better decision making. There is an interest in developing criteria for future decision making. With SWD, there were no good tools available and it was already widespread, so the decision was made to not regulate, but to</p>

	<p>define some BMPs. As the situation has developed need to re-adjust (for example doing resistance management). Two of the new pests. Spotted lanternfly and European cherry fruit fly are related to invasive plants. Are there any prediction models or other tools being considered to look at distribution or control of invasive plants to assist in invasive insect management? This is a new way of thinking about the approach and will have to think about the use of invasive plant detection / management / correlations to see if there is a way to use this to our benefit. States should review the language of their plant protection act and make sure they have the ability to implement quarantines. If concerned about response time, may want to consider revisions to the language. There are model laws on the NPB and SANC pages (http://sanc.nationalplantboard.org/state-tools/). Outreach is always important, and commerce often outpaces the spread of regulation. Quarantine may not always be the most effective response. States can harmonize regulations.</p>
12:00 – 1:00 PM	Lunch - Cutter
	Session Moderator: Kim Rice, Maryland Department of Agriculture - Schooner
1:00 – 1:30 PM	US Forest Service involvement with pests of regulatory concern [pdf] <i>Mike Bohne, USDA Forest Service</i>
1:30 – 2:30 PM	<p>Risk from pathogens: Detections and designing quarantines</p> <ul style="list-style-type: none"> • Available molecular tools for detection <i>Katya Nikolaeva, Plant Pathologist, Pennsylvania Department of Agriculture [pdf]</i> • Regulating a plant disease without visual symptoms – Plum pox in New York <i>Chris Logue, New York Department of Agriculture and Markets [pdf]</i> • Moving into the future: Discussion
2:30 – 3:30	<p>Spotted lanternfly: Outreach, Response, Expecting the Unexpected</p> <ul style="list-style-type: none"> • Introduction <i>Dana Rhodes, Pennsylvania Department of Agriculture</i> • Group Discussion <p>Notes: Three critical messages: why this is important, who will be impacted, what can you do (i.e. look before you leave, evidence of what you may see). Most important thing that you can teach people is the life cycle so that they know what to look for and when. Do well timed outreach so that the right people are getting the right images and messages at the right time. People often describe the immatures stages as “fast-moving ticks”. Be prepared for how to talk with people who have very heavy infestations. Be prepared to work with municipalities to ensure that scare tactics are not used – SLF will not eat your house, will not overwinter in your house, and are not bloodsucking insects. It is not well controlled by a targeted home-spray, although this service will be offered. Make sure that communities are aware of what the best strategies are. Think about where you can get messaging. Can you utilize staff in other divisions or agencies to distribute and post outreach materials? Use digital services as much as possible. Be clever with your messaging (i.e. Hunters: set your sights on the spotted lanternfly {posted during deer rifle season}). Consider what you are asking the public to do on social media and consider how you will manage the response. As SLF is adapting to a new environment, so must we adapt messaging and approach. Start outreach early with community leaders, elected officials, sister agencies, town hall meetings, electronic messaging, train the trainer programs, update meetings, newsletter articles, and business visits.</p>
3:30 - 5:00	Small group work break-out sessions: examples include - Designing a firewood regulation; Clean boxwood programs; Spotted lanternfly messaging; Others as indicated by meeting content
6:30 – 8:30 PM	New England Banquet Dinner
	Hospitality / Discussion Time: Hospitality Room Hosted by HIS - Soundings

THURSDAY

April 12, 2018

Time	Topic
7:00 – 8:00 AM	Breakfast – Schooner Foyer
Session Moderator: Judy Rosovsky, Vermont Agency of Agriculture	
8:00 – 8:30 AM	EPB Members on NPB Committees Updates
8:30 – 9:00 AM	Question & Answers on ezfedgrants [pdf] States should submit concerns about ezfedgrants to PPQ ahead of the meeting so that there is a structured response. <i>Carrie Croy-Owen, USDA APHIS PPQ</i>
9:00 – 9:45 AM	A pathway, a dead insect, a confirmation of sample & a report: Coming to consensus on a regulatory response <ul style="list-style-type: none">• <i>EAB detection in Delaware, Faith Kuehn, Delaware Department of Agriculture [pdf]</i>• <i>Khapra beetle in Connecticut, Vicki Smith, The Connecticut Agriculture Experiment Station</i>• <i>Lost samples and chain of custody, Dana Rhodes, Pennsylvania Department of Agriculture</i>• <i>Exploring diagnostics solutions, Clint McFarland, USDA PPQ</i>• <i>Discussion--</i>
9:45 – 10:00 AM	IRC update [pdf] <i>Ann Gibbs – NPB President, Animal & Plant Health Division, Maine Department of Agriculture, Conservation & Forestry, & Paula Henstridge, USDA APHIS PPQ</i>
10:00 – 10:30 AM	~ Break ~
10:30 – 11:00 AM	HIS Report (Joint) [pdf]
11:00 – 11:30 AM	CAPS Report (Joint) [pdf]
11:30 AM – 12:00 PM	EPB Meeting Wrap-Up and Next Steps – EPB Members Only

APHIS – Spotted Lanternfly

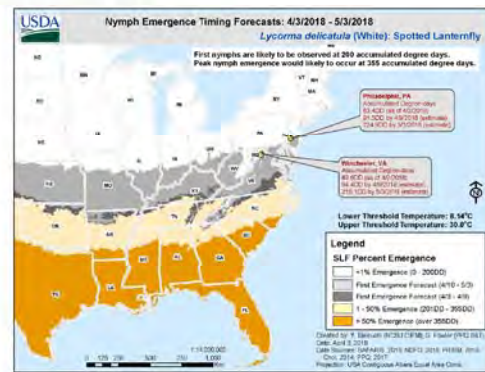


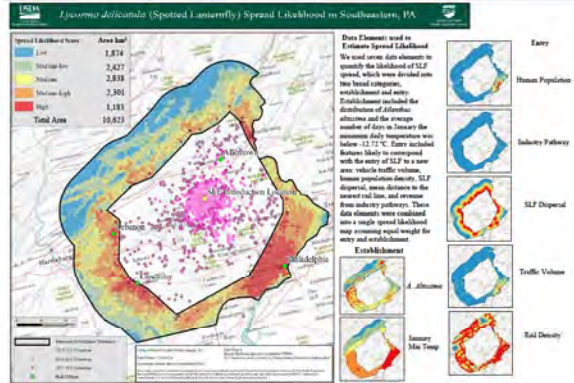
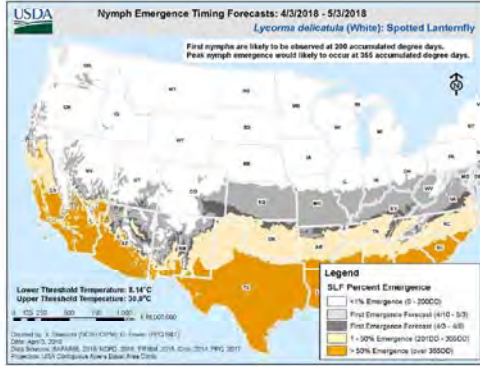
Funding

- CCC Request Signed by Secretary Purdue February 7, 2018 – \$17.5 Million received
- Additional PPQ resources committed via Farm Bill Rapid Response
- Appropriation of \$5 Million not clear if this is annual (unknown until 2019)

Survey Information

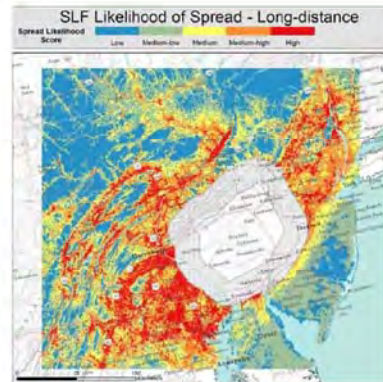
- Survey information will be captured electronically primarily via ESRI Collector – PA will continue to use PA plants and PPQ will upload data into system regularly
- ESRI Collector provides “live” updates (when connected to WiFi)





Strategy Shift

- Outside moving in
- PPQ will manage perimeter
- PDA will manage the core and outside perimeter
- Operations will be coordinating weekly to ensure consistent public messaging.



Visual Survey

- Focus on high risk areas
- Complete perimeter survey
 - State will complete state wide
 - State will complete core
- Visually examine trees for SLF
- ESRI Collector system – records data
 - Launching April 16



Treatments

- Bark Spray Application
 - Systemic Application – Absorbed and protects entire tree
 - Entire season efficacy
- Herbicide Basal or Foliar Application of smaller trees



Where is PPQ?

IMT's supported PPQ's response:



Planning → Infrastructure → Operations

Planning

- 4 – Facilities Identified
 - Currently occupying
 - Glenside - USDA
 - Lancaster - USDA
 - Expected occupancy
 - Easton April 16
 - Pottsville expected April 23'



Security Assessments planned after all 4 sites occupied

Planning – Contracting

- Treatments – Closes April 10
 - Interested vendors questions responded
 - Technical Review Completed by April 14
- Lure – Closes April 12
- Tree Bands – Initial delivery received (230 rolls)
 - Larger Purchased April 25 Closing



Where is PPQ?

IMT's used to support PPQ's response:



Planning → Infrastructure → Operations

Survey Operations Start April 16
Treatment Planned May 1

Staffing – Operational in PA

Hired Locally

- SLF Director
- 20 Technicians (LA)

- Pending – NTE (TBD)
- 4 SPPQO's, 9 PHSS's, 1 PSA, 1 GIS Specialist, and 40 Technicians.

Detailed on the Ground

- 2 Supervisor (Glenside and Lancaster)
- 7 PPQ Officers
- 11 Technicians
- IMT's assisting with logistics
 - Facilities, IT, Safety, Training, ect

JDOC and MAC – Stood up

- JDOC
 - Reporting to Department Level for greater visibility
 - Additional resources
 - Better coordination
- MAC
 - Heads of all APHIS units briefed on April 5
 - Resource requests streamlined – Example IT Switch for Glenside; HR Prioritization elevated for NTE

Communication

- PSU Extension
- State Departments
 - DE, MD, NJ, NY, PA, WV, VA
- APHIS – LPA
- APHIS – PPQ
- Primary Messaging Goal:
“Look and Report”

Social Media DRAFT example:





Program Update
Phytophthora ramorum



Program Update
Phytophthora ramorum



Program Update
Phytophthora ramorum

Current procedures in positive nurseries:

- Inspection and sampling continue at the increased level in positive nurseries.
- A critical control point (CCP) assessment must be conducted in the positive nursery by regulatory officials.
- The CCP identifies mitigations and/or changes to cultural practices that are documented in a compliance agreement.
- A compliance agreement is required in order for the nursery to remain an interstate shipper.



**Impacts of Regulation and Program Changes-
Improved Communication**





Number positive nurseries

Area	Nursery/Site	2015	2016	2017	2018 to date
Quarantine	Interstate	0	1	5	0
Non-Quarantine	Interstate	6	11	4	1
Quarantine	Intrastate	1	1	7	3
Non-Quarantine	Intrastate	9	6	6	4
Quarantine	Landscape, etc.	0	0	2	1
Non-Quarantine	Landscape, etc.	3	2	0	0
Isolated Holding Area				1	0
	TOTAL	19	21	25	9



New Contact for Notify



- Joe Hegarty is the new contact for Notify
- <https://caps.ceris.purdue.edu/home>

Farm Bill Changes



- Revised Farm Bill work and financial plan template
- Revised Farm Bill accomplishment template
- Templates are on the CAPS site – 2018 Farm Bill

States participating in Farm Bill Surveys



2015 Survey	2016 Survey	2017 Survey	2018 Survey
AL	AL	AL	AL
LA	CT	CT	KY
MA	KY	KY	MI
MD	LA	LA	NC
NC	MA	MD	NJ
NV	MD	MI	NV
NY	NC	NC	NY
OH	NJ	NV	OH
RI	NY	OH	PA
SC	OH	PA	SC
TX	PA	RI	TN
TN	TN	TN	VA
VA	TX	VA	WV
WI	VA	WV	
WV			
	HUB lab	HUB lab	HUB lab
	FL	FL	FL
	MI	MI	MI
	NY	NY	NY
Notify	Notify	Notify	
IN	IN	IN	



Program Update

Phytophthora ramorum



Phytophthora ramorum

History Time Line

- 1993 Discovered in Europe on Rhododendron and Viburnum
- 1995 *P. ramorum* first observed in California
- 2000 Identified as cause of Sudden Oak Death
- 2001 Found in a southwestern Oregon forest
- 2002 APHIS Emergency **Federal Regulations published**
- 2002 Found widespread in European nurseries
- 2003 Found in North American nurseries (California, Oregon, Washington, British Columbia - Canada)
- 2003 First tree species found infected in Europe
- 2004 First US find in large nursery in Azusa, California
- 2004 APHIS F.O. Order Regulating CA, OR, WA and nursery stock movement
- 2007 APHIS Interim Rule published, codifying the 2004 Federal Order
- 2012 F.O. Restrictions on *P. ramorum* host plant imports
- F.O. Notification for nursery stock interstate shipment
- 2013-14 Two F.O.s relieve regulatory requirements for many nurseries while increasing requirements (2014) for positive interstate nurseries.
- 2013-15 Partial county quarantine expansion in Oregon, one county expansion in California (Trinity)
- 2015 F.O. deregulates regulated areas in CA, OR, and WA. Quarantine area remains regulated
- 2015 EU1 found in Curry Co. quarantine area
- 2016 Domestic movement of Soil regulations

Systems Approach to Nursery Certification

EPB 2018



Key Points to SANC

- **Risk Assessment** - Pest risk analysis of facility
- **Pest Management Plan** - developed from risk analysis
- **Facility Manual** - developed from PMP and other inputs
- **Implementation** – of Facility Manual specifics
- **Audits (of the facility)** – Verification that facility manual is being followed. Performed by facility and regulators.

Phase I

Grower	RA	PMP	SANC Manual	Internal Audits	External Audits	Certified Participant
Conard-Pyle	√	√	√	√	√	√
Forrest Keeling	√	√	√	√	√	√
Walla Walla Nursery	√	√	√	√	√	√
Lucas Greenhouses	√	√	stopped			
Oregon Pride Nursery	√	√	√	√	√	√
Greenleaf Nursery	√	√	√	√	√	√
Southeastern Growers	√	√	√	√	√	wip
McKay Nursery	√	√	√	√	√	√

Phase II

Grower	RA	PMP	SANC Manual	Internal Audits	External Audits	Certified Participant
Angel Creek, GA	√	√	√	√	√	
Greenleaf Nursery, NC	√	√				
Greenleaf Nursery, TX	√	√				
DS Cole, NH (GCP)	√	√				
Willoway, OH	√					
Loma Vista, KS	√	√	√			
Dickman Nursery, NY	√	√				
Altman Plants, CA	√	√				
Walla Walla, Or	√	√				

SANC is Moving Forward

- 2018 Annual Workshop SANC subcommittees agreed
 - Increase inspector trainings
 - Increase SPRO trainings
 - Initiate SANC when Pilot Phase 2 facilities completed

Meet The Team



BMP's Moving Forward

- Once you go SANC you start rethinking everyday business operations
- They provide buy in for industry
- Easy mechanism for address Critical Control Points
- Builds better relationships with those we regulate

BMP's with SLF

- Given the diversity of industries impacted by SLF needed a new way to think about this
- Not enough SPRO's as resources
- Flexible for each business and state
- Think outside the box

BMP's with SLF

- Asked Hardwoods Industry
 - How do you business everyday?
 - Who handles products?
 - What positions have an opportunity to exclude SLF?
 - Who knows your industry better?

BMP's with SLF

- Hardwoods
 - Took it and ran with development of plans
 - Asking industry members to officially adapt the BMP's
 - Would like PDA recognition
- Fruit Tree
 - Finalizing plan

Verification

- Adopted BMP's can be verified
- Permits and Compliance Agreements allow for verification of records, training, etc.

Future

- Additional Industries interested in BMP's
 - Grape/Wine Producers
 - Green Industry
 - Transportation



***It's not just for
plants!***

Key Changes to the U.S.– Canada Greenhouse Certification Program

APHIS-PPQ
April, 2018



Animal Plant & Health Inspection Service

Overview

- Background
- What's new?
- Informational Resources
- Questions



Animal Plant & Health Inspection Service

Background

- GCP in place since 1996
- Facilitate movement of greenhouse grown plants between the U.S. and Canada
- Allows authorized facilities to ship using a GCP sticker in place of a phytosanitary certificate
- APHIS and CFIA have revised program to strengthen oversight and improve consistency of implementation, reflect current business practices, close phytosanitary gaps

Animal Plant & Health Inspection Service

Goals of Discussion

- The legacy MOU and PPQ export document is replaced by a brief MOU outlining the agreement and a **Technical Requirements** document that describes the program and responsibilities of NPPOs and authorized facilities under the program
- Today's presentation is an opportunity for APHIS to highlight the key changes, and to allow you to provide comments, and ask questions

'New and Improved' GCP

- Basic program is unchanged
- Increased responsibility for facility to ensure plants meet phytosanitary requirements under an audit-based systems approach
- GCP sticker is equivalent to U.S. or Canadian phytosanitary certificate, issued on behalf of APHIS or CFIA

What is the same?

- MOU between APHIS and CFIA
- Allows Authorized Facilities to produce Certified plants under a systems approach to meet phytosanitary import requirements of Canada and the U.S.
- Audits by NPPOs (State cooperators) confirm compliance and allow for corrections.
- Facilities can ship plants between U.S. and Canada using a GCP sticker in lieu of a PC

What is new?

- **Management**
 - Co-administration: Commitment that APHIS and CFIA will work together and co-administer certain aspects of the GCP.
 - Equivalence: The compliance agreement (CA) between APHIS and U.S. authorized facilities will include the same requirements as the CA between CFIA and Canadian facilities.

What is new?

- **Technical Requirements**
 - The Technical Requirements describes the responsibilities of the NPPOs and facilities under the GCP
 - This document and templates will promote consistent implementation within the U.S. and Canada.

What is new?

- **Written Pest Management Plan (PMP)**
 - Describes how elements of the Compliance Agreement will be conducted for each facility
 - Template provided in Appendix 1

What is new?

- **Plant list**
 - Current 'Excluded Plant List' in MOU eliminated
 - The PMP will include a list of plants in production, their origin and associated phytosanitary risk.
 - Plant taxa must meet entry requirements of U.S and Canada to be eligible for GCP.
 - Plant list is evaluated by the NPPO to ensure eligibility and to identify the need for any specific pest mitigation measures ('modules')



What is new?

- **Audits**
 - Audit checklist provided as guidance for both Canada and US auditors
 - Frequency of audits will be decreased to twice a year for facilities that consistently meet GCP requirements
 - Increased emphasis on audits and program compliance as opposed to inspection

Changes to make life easier

- **Interfacility stamp**
- **28 day growth and monitoring period**
- **Process to allow exemptions from growth and monitoring period, and to allow outdoor growth**
- **Mechanism to allow bamboo stakes or other 'associated articles' to move under GCP sticker**



Animal Plant & Health Inspection Service

Informational Resources

- Training material and guidance documents developed
- ❖ GCP Information sheet and FAQ available on-line

https://www.aphis.usda.gov/publications/plant_health/fsc-greenhouse-plant-cert-program.pdf
https://www.aphis.usda.gov/publications/plant_health/fsc-greenhouse-plant-cert-program.pdf



- Conduct GCP audit training for ACOs- **first training session delivered in FL 3/20/2018**
- Continued outreach to GCP stakeholders

Animal Plant & Health Inspection Service

APHIS Contacts

- Sarika Negi – Accreditation Policy Manager
(sarika.negi@aphis.usda.gov; 301-851-2349)
- Laney Campbell – Manager, Trade Specialists
(laney.campbell@aphis.usda.gov; 919-855-7314)
- Patrick Marino – Field Operations Trade Specialist-
(Patrick.F.Marino@aphis.usda.gov; 518-218-7515)
- Zaida, Ortiz- Field Operations trade Specialist,
(Zaida.Ortiz@aphis.usda.gov; 407-541-6721)

Animal Plant & Health Inspection Service

Implementation



- Pilot reauthorization of the first facility- December 2017
- 1-2 years to complete re-authorization of all facilities
- What happens when some facilities are under the new program and some under the old?

Animal Plant & Health Inspection Service

Questions/Comments?



Maine's Industrial Hemp Program

Yes it is *Cannabis sativa* L., but no it is not Marijuana



Gary Fish
Maine State Horticulturist
Gary.fish@maine.gov
207-287-7545



What is Industrial Hemp?

- ▶ *Cannabis sativa* L. with a delta-9-tetrahydrocannabinol (THC) concentration that does not exceed 0.3% on a dry weight basis



The many faces of Industrial Hemp



Many different products



Maine IH program is new

- ▶ 2016 - First year of licensing
 - ▶ 3 Applications
 - ▶ Grower agreements - up to 26 acres
 - ▶ Only 1 grew hemp - ¼ acre and produced 250 lbs. of seed
- ▶ 2017 - Second year of licensing
 - ▶ 35 Applications
 - ▶ 32 Grower agreements - up to 144 acres
 - ▶ Only about 32 acres actually planted



Maine IH program year 3

- ▶ 2018 - Third year of growing
 - ▶ 99 Applications
 - ▶ 45 Signed agreements (04/09/2018)
 - ▶ 1,027 potential acres



2017 grower survey (n=10)

- ▶ Challenges
 - ▶ Obtaining approved seed
 - ▶ Drought
 - ▶ Getting crop harvested
 - ▶ Weeds
 - ▶ Wet spring/late planting
 - ▶ Finding market
 - ▶ Fungal disease
 - ▶ Too many male plants
 - ▶ Variable genetics/maturation rates
 - ▶ Low germination rate

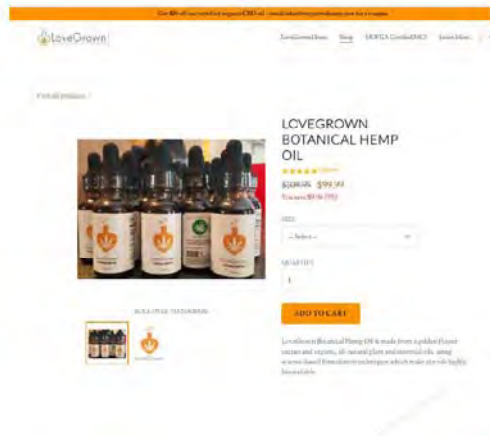


2017 grower survey (n=10)

- ▶ Crop marketed?
 - ▶ 30% yes - 70% no
- ▶ Planned markets
 - ▶ CBD Extraction 100%
 - ▶ Seed 80%
 - ▶ Bud or leaf oil 40%
 - ▶ Terpene extraction 40%
 - ▶ Fiber 30%
 - ▶ Grain (whole or as hearts) 10%



One Maine hemp product



More Maine hemp products

WILD FOLK FARM
CBD HEMP ABOUT FARM STORE RICE MAINE RICE PROJECT VEGETABLES AND MEAT CONTACT

Wild Folk Pharmaceuticals

High CBD Medicinal Hemp MAINE GROWN!
Full Spectrum Small Farm Top Test Results

Hemp - Maine State Licensed & tested. Non Psycho-tropic - <0.3% THC

Salve Benefits*

- Inflammation •Ache •Numbness •Pain
- Burns •Relaxation •Skin Repair
- Lubrication •Rash •Massage
- Searing •Carpal Tunnel •Cramps

Certified Clean Cannabis* by MDTGA

Tincture Benefits*

- Chronic Pain •Nausea •Anxiety •Inflammation
- Arthritis •Cancer •Neurological & Heart Health
- COPD Issues •Phobias •Headaches •Mental Ailments •PTSD •Diabetes •Epilepsy/Alz
- Depression •MS •Seizures •Migraines
- Opioid Abuse •Autoimmune Disease •Lyme
- Green Tea •Probiotics •Much More

2017 grower survey (n=10)

- ▶ Plan to license again in 2018?
 - ▶ Yes - 100%
- ▶ Expected 2018 acres

Expected acreage	Number responding*
<1	1
1 - 3	2
3 - 5	5
5 - 7	0
7 - 10	1
25 - 50	2
>50	2

*3 responded with two answers



2017 grower survey (n=10)

- ▶ Prefer to grow from tissue culture/clones?
 - ▶ Yes - 80% No - 20%
- ▶ Prefer to grow indoors?
 - ▶ Yes - 70% No - 30%
- ▶ Also a medical marijuana grower?
 - ▶ Yes - 60% No - 40%



Licensing rules

- ▶ Applications taken between January 1 and April 1
 - ▶ Application fee is \$100
 - ▶ Must source certified seed, or
 - ▶ documentation from a third party lab that the seed source came from parent plants that tested below 0.3% THC content



Examples of seed "pedigrees" that we will accept

2762-1 Commercial Lab
1716-1 Commerce Court, Suite 7
Lafayette, CA 94502
(530) 942-0025
Laboratory Report of Analysis

Specimen Information: Seed, Commercial Variety
Labul Class: 08/23/2018
Complete Date: 08/24/2018
Client: [Redacted]
Line/Specimen: Cannabis Sativa, Seed

Assay	Sample	Total	LBST % by wt.	THC % by wt.	CBG % by wt.	CBN % by wt.
08-2318	0818	10.48%	10.48%	0.02%	0.20%	< 0.01%

Notes:
This specimen was analyzed via gas chromatography/MS.
I verify that the above analysis was performed by me and that the information included is accurate to the best of my knowledge.
Buyer: M. Blanton
CSD Lab



Licensing rules

- ▶ If application is complete:
 - ▶ Grower agreement is sent out
 - ▶ Agreement fee is \$500 plus \$50 per acre
 - ▶ Grower agrees to:
 - ▶ Non-transferable license
 - ▶ License expires on December 31 and must reapply each year
 - ▶ Records must be kept for a period of 3 years and be available to the Department upon request
 - ▶ The Department may require reporting and the licensee must submit reports
 - ▶ All information provided may be publicly disclosed and may be provided to law enforcement agencies without notice



Licensing rules

- ▶ Grower agrees to:
 - ▶ Industrial hemp will only be planted on growing areas shown in agreement
 - ▶ License agreement changes are limited to reduction in acreage and changes to contact information
 - ▶ No mixing of industrial hemp and marijuana plantings
 - ▶ Unrestricted access for inspections and sampling at any time
 - ▶ Notify of the intent to harvest 15 days prior to harvest date
 - ▶ One composite sample per growing site, one lab analysis included in agreement fee
 - ▶ Crops testing above 0.3% THC on a dry weight basis will be destroyed and the licensee is responsible for all costs



Licensing policy interpretation

Can I grow industrial hemp indoors or in a greenhouse?

- No. Growers can start plants indoors, but once the seedlings are hardy enough to survive outdoors they must be grown outside without any sort of roof or covering over the top.
- Industrial hemp seedlings are defined as non-flowering plants that are no more than 12 inches tall.
- All seedlings started indoors must be moved outside and grown without coverings by June 1. Should the threat of frost occur after June 1, the intermittent use of a row cover or other frost protection is allowed.



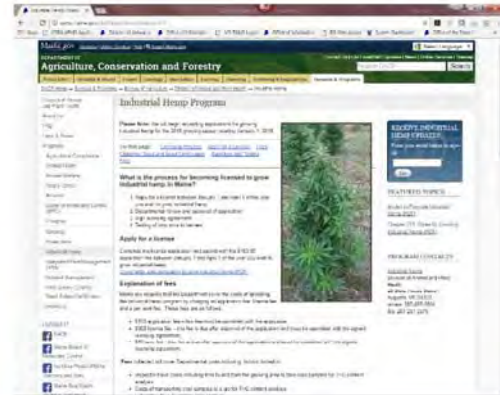
Can I grow industrial hemp from tissue culture or clones?

- Yes, as long as you can provide appropriate third party analysis on the variety you plan to grow. If you plan to grow from tissue culture or clones, submit documentation on the plants from which the tissue culture or clones will be produced that includes the same minimum information required above for those growing industrial hemp from seed.



Photo courtesy of Oleg Zharsky

Industrial hemp website



- <http://www.maine.gov/dacf/php/hemp/index.shtml>

What about marijuana

- Legislature passed a moratorium on commercial sales until February 1, 2018
- Legislature did not pass an extension of the moratorium
- Commercial growers are still in limbo
 - No licensing rules
 - Cannot grow and sell without a license
- The Legislature is still working on this



Questions?



View from the National Plant Board - 2018

Regional plant board meetings
Presented by: Ann Gibbs, NPB President, Maine Dept. of ACF

This is your organization. NPB is here to try to make your job easier and provide states with a collective voice when dealing with plant health issues.

NPB Leadership



Ann Gibbs ME
President



John Caravetta AZ
Vice President



Julie Van Meter NF
Secretary/Treasurer



Joe Collins KY
Past President

Aurelio Posadas
Exec. Secretary



NPB Board of Directors



BOD with PPQ Management Team

Influence of NPB Members

- Spotted Lanternfly – PA relentless push to protect other states resulted in funding from USDA, NASDA contribution to outreach
- ReFresh (Regulatory Framework for Seed Health) – learning from the SANC experience and applying these processes to the seed industry
- Imported Fire Ant Review – reinvigorated PPQ to make changes to the IFA program
- Invasive Species Advisory Committee – 10 years with a NPB representative, recently participated on a podcast focusing on fed/state coordination
- NPAG (New Pest Advisory Group)/DEEP (Deregulation Eval of Established Pests) – provide state input directly to influence APHIS PPQ decisions
- FRSM (Fed Regulated State Managed Pests) – request from states to regulate pests entering the US of concern to specific states, but not federally
- RPDDC (Now PEC (Pest Eval Committee) – feedback from states to determine which federal domestic pest programs should be reviewed. PSB completed.

Committee Work

- Standing – Resolutions & Website
- President Appointed – Japanese Beetle & Imported Fire Ant
- Non NPB USDA committees
 - Program review – CAPS, Farm Bill, Natl Clean Plant Network, Biocontrol
 - Pest Focused – P. ramorum, Gypsy Moth, Citrus Health
 - Process Review – Export Cert., Coop. Agreements, FRSM, Post Entry
 - Issues – Pollinators

Great Opportunities for All to Contribute

How do we pay for all this work?

- State dues
 - About \$50K
- USDA Cooperative Agreements
 - Biotechnology Regulatory Services BRS \$20K
 - Safeguarding \$260K
 - Systems Approach to Nursery Certification \$360K

Total of about \$700,000

What I learned being President?

- Some people think you have all the answers
- Lots of moving parts to every issue
- Mediator skills important
- It's lonely at the top
- Humbling to see all that is involved
- Colleagues work together to solve problems
- Appreciation for issues in other states
- We have a pretty good system for resolving issues
- The importance of getting feedback and participation

Meaningful NPB Opportunities

- 1998 Kansas program review
- State plant pest regulation summaries
- National Invasive Species Advisory Committee
- Japanese Beetle Harmonization
- Influence on Domestic/International Trade related issues
- North American Plant Protection Organization (NAPPO)

Hot Issues

- Soybeans to China
- Old World Bollworm
- XcP on Begonias from Europe
- PPQ Diagnostic Issues
- CFIA EAB quarantine expansion
- Citrus Health

Soybeans to China

- Issue: Shipments of soybeans for grain shipped to China were exceeding the noxious weed tolerance. Complicating factor is that the inspections are done by FGIS for an APHIS issued certificate. Soybean trade is worth \$1 billion.
- Next steps: Task forces formed, developing BMPs using a systems approach, immediately instituted changes and shipment are getting through, NPB participation on the US Grain and Oilseed working group and the technical work group



Old World Bollworm

- Issue: Pest not found in the US, determined a new pathway on cut-flowers. Interceptions have been made in CA and FL
- Next Steps: Just make certain federal agencies (CBP & USDA) working at the border are familiar with this new pathway. This shipment was from India.



Xanthomonas on Begonias

- Issue: Trade publication announced XcP found on begonias from Europe. States weren't notified by APHIS.
- Resolution: It was determined that this species of XcP was not federally regulated, therefore USDA would not be involved.



EAB Quarantine Expansion in Quebec

- Issue: CFIA expanded the quarantine and loggers were informed they could ship ash all year forgetting states were still regulating EAB
- Resolution: Informed USDA of the impact on states. States reminded industry that EAB requirements were still in place. Shared this with neighboring states.



PPQ Diagnostic Issues

- Issue: Lost samples, delayed identifications, no response to inquiries was having consequences to states actions and resources.
- Next Steps: Surveyed the SPROs and SPHDs and shared this feedback with APHIS PPQ. On a preliminary phone call determined that the 2 major issues were communication and process. PPQ will be working to address both.



Citrus Health

- Issue: The U.S. stands to lose its multi-million dollar citrus industry to Huanglongbing (HLB). Commonly known as citrus greening disease, it is always fatal to citrus trees that are infected.
- Resolution: The APHIS-sponsored Multi-agency Coordination Group has been effective in assigning \$25 million annually in funds appropriated in Congress to support shovel-ready projects to assist producers and researchers in management of the vector and development of strategies against the disease. Unfortunately, the disease still has the upper hand.



How do we interact with PPQ?

- Leadership calls – twice monthly, updates and special topics
- Direct conversations with Deputy Administrator
- State Liaison – Paula Henstridge is certainly the gate keeper and makes sure issues don't get stopped at the gate
- NASDA monthly calls
- Strategic Alliance
- Current and legacy issues

Things to work on - Communication


- Interagency Relations Committee – part of the Strategic Alliance
 - Significant turnover in both groups
 - Repeated restructuring within PPQ
- Identified a list of issues and now developing solutions
- 5 Strategies (Action Plans)
 - Roles and responsibilities – who does what when
 - Orientation and training – educating staff and stakeholders
 - Processes and protocols – putting everyone on the same page
 - Consultation and engagement – early and often
 - Collaborative outreach – educating academics and other state stakeholders

The Future

- New Executive Secretary
- Revising the website
- Encourage member participation
- On-boarding new NPB members (NPB 101)

Questions?





If you think of something later...

Contact:

Ann Gibbs at ann.gibbs@maine.gov

APHIS

PPQ Field Operations

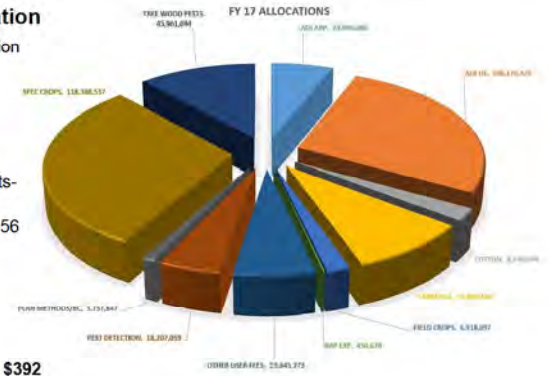
Carlos Martinez
Executive Director
USDA-APHIS-PPQ Field Operations
Eastern Region Plant Board Meeting
Mystic CT April 11, 2018



Financial Information

The five largest Allocation areas were:

1. Specialty Crops- \$118,388,537
2. AQI User Fees- \$106,176,425
3. Tree and Wood Pests- \$45,961,694
4. Farm Bill- \$35,948,156
5. AQI Appropriated- \$23,944,686



Total budget amount: \$392 million



UPDATES ON SPHD HIRING STATUS DELAWARE AND NEW YORK

PERMANENT POSITION HIRING LIMITATIONS



Regional Programs

UPDATES ON SELECTED PROGRAMS

Asian Longhorned Beetle Eradication

Parts of three states involved in the ALB Program: NY: 111 Sq. Mi., MA: 110 Sq. Mi., OH: 62 Sq. Mi.

- ❖ 28 square miles removed from the regulated area in New York City as the Eastern Queens quarantine was rescinded.
- ❖ A survey modeling system implemented in MA for better planning and survey progression.
- ❖ Final Surveys completed in Batavia and Stonelick Townships, OH in 2017.

Asian Longhorned Beetle Program

The Asian longhorned beetle (*Anoplophora glabripennis*) is an exotic wood boring pest that relies on hardwood trees to derive its food supply and complete its lifecycle.

Currently parts of three States are regulated for ALB: New York (111 square miles), Massachusetts (110 square miles), and Ohio (62 square miles).

- 28 square miles were removed from the regulated area in New York City as the Eastern Queens quarantine was rescinded.
- A survey support modeling system was implemented in Massachusetts allowing for better planning for ground and aerial survey progression.
- Final surveys were completed in Batavia and Stonelick Townships, OH in 2017.

PHOTO BY JAMES KIRBY, USDA Forest Service, Bugwood.org

Emerald Ash Borer

- Propose rule to remove federal quarantine is currently being reviewed by OMB
- Regulations and regulatory enforcement will remain in place until quarantine is removed.
- When quarantine is removed, EAB program will shift from a regulatory focus to a biological control focus

Emerald Ash Borer Program

The emerald ash borer (EAB) is an invasive beetle that kills ash trees. The Field Operations EAB program works to maintain ash as a viable component of the American landscape.

Field Operations conducted surveys for EAB in 31 states. In 2017, we successfully detected EAB outside of regulated areas 25 times, which included detection in 1 new state.

We added 52,742 square miles to the regulated areas to protect against human assisted movement of EAB.

Field Operations also worked to release over 1 million parasitoid insects to act as biocontrol agents for this beetle.

We received the following parasitoids and released them in 25 states, D.C., and two Canadian provinces:
321,565 *Dacnusa*, 543,042 *Tetraneura*, 32,980 *Spathius* gramineus, and 20,573 *Spathius agrilis*.

We processed production of *Spathius* gramineus for 40% and shipped these parasitoids for program release and research in 10 states.

PHOTO BY LORI BLAIR, USDA Forest Service, Bugwood.org

Firewood

- Solicitation of comments from NPB and SPHDs

Preferred Options from feedback

- APHIS issues proposed rule and requires record keeping
- APHIS works with States to draft a model State Regulation template
- PPQ MT Special Topics



Plum Pox Eradication

All New York Leaf Samples negative for PPV

Niagara County Negative for third consecutive year - soon to be released from federal regulation

Over 108,000 sample collected in 2017

Examining the use of canine teams to aid in the detection of PPV



Plum Pox Virus Eradication Program



- NYSDAM Orchard Survey collected 108,330 samples.
- NYSDAM Residential Survey collected 1,637 samples.
- PPQ Homeowner Survey collected 10,010 samples.



PHOTO BY JAMES KIRBY, USDA Forest Service, Bugwood.org

- All 2017 NY leaf samples were negative for plum pox virus.
- Niagara County remained negative for PPV for the 3rd consecutive year and will soon be released from federal regulation.
- No additional positive samples were found this year in Ulster County.



Spotted Lanternfly

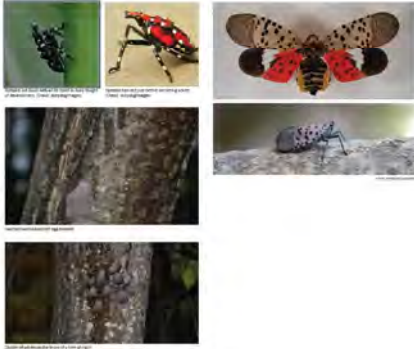
PPQ working through USDA has secured \$17.5 million for the eradication

Currently working in a 13 county area in PA.

Offices have been identified, response plans finalized

Field activities are planned to start Mid-April

Main emphasis on eradication in PA with additional activities in VA, DE, MD, NJ, and NY



European Cherry Fruit Fly (ECFF)

\$3.5 Million in Emergency Response Funding obtained for ECFF through Farm Bill

US Canada have recently completed a TWG

Developing a response plan with NYSDAM



Wood Packaging Material Initiatives- Delaware River

Regulated Wood Packaging Material

Regulation & Background

- 7 CFR 319.40-3 established in 2006 codified compliance with ISPM-15.

- Non-compliant material must be re-exported.



Dunnage being offloaded 2017. Image courtesy of CBP Philadelphia

Updates

- Incineration, in lieu of re-export, authorized November 2016 for maritime dunnage.

- January 2017 dunnage begins to be incinerated at ports within the Delaware River and Bay area.



Export Log Fumigations



Species shipped

- 13 different species of logs are shipped out of the North East.

Destinations

- Over 60% of the logs are shipped to Hong Kong

The number of export log treatments in the northeastern states has remained relatively stable for the last year.

Total # phytos issued for logs by state 2017:

ME	251
VT	286
NH	476
CT	367
RI	0
MA	86
NY	1440
PA	947
NJ	176
DE	0
MD	296
WV	388

PPQ STRATEGIC INITIATIVES

Strengthening Pest Exclusion:

1. Offshore Nursery Cuttings Certification Program
2. Risk-based Sampling: Imported Plants for Planting
3. Molecular Technology: Pest Detection and Diagnostics

Optimizing Pest Management:

4. Data Management: Leveraging Internal IT Development Resources To Build Stronger Domestic Programs
5. Agricultural Detector Canines
6. Unmanned Aircraft Systems

Making Agricultural Trade Safer:

7. Global E-Phyto System
8. Seed Health regulatory Program
9. E-Commerce
10. Sea Containers

Risk-Based Sampling

Matt Royer, Associate Deputy Administrator



Establish risk-based sampling levels for imported plants for planting and expand use of risk-based sampling in the perishable cargo environment.

STRENGTHENING PEST EXCLUSION

Agricultural Detector Canines

Carlos Martínez, Executive Director



Use canines to improve early detection capabilities and more precisely target plant management and eradication activities.

OPTIMIZING PEST MANAGEMENT

Unmanned Aircraft Systems

Ron Sequeira, Associate Deputy Administrator



Explore, identify, and apply unmanned aircraft system (UAS) technology to strengthen PPQ's pest detection and mitigation capabilities.

OPTIMIZING PEST MANAGEMENT

eCommerce

Carlos Martinez, Executive Director



Prevent the sale of prohibited plant material via the Internet.

MAKING AG TRADE SAFER

Sea Container Cleanliness

John Greifer, Assistant Deputy Administrator



Work with international partners and the maritime industry to develop and implement voluntary guidelines for effectively cleaning and disinfecting sea containers, helping to reduce the risk of hitchhiking pests.

MAKING AG TRADE SAFER

Budget

2018 Omnibus Funding

- There was an increase from 2017 of \$16.17 million in appropriated funds.
- The increases were in:
 - Specialty Crops
 - AQI Appropriated
 - Tree and Wood Pests
 - Field Crops/Rangeland Pests

There were no changes in the amount of appropriated funds between 2017 and 2018 for:

- Cotton Pests
- Pest Detection
- Plant Protection Methods Development

Questions?

Office of Field Operations Agriculture Programs and Trade Liaison



Eastern Plant Board
April 9-13, 2018



Mihel Tomkies



APTL Strategic Plan

OUR MISSION - WHO WE ARE. WHAT WE DO.

Protect the border by preventing the entry of threats to American agriculture & natural resources through innovative policies and processes

OUR VISION - WHAT WE ASPIRE TO BE.

Provide innovative, convergent solutions to facilitate the agricultural mission

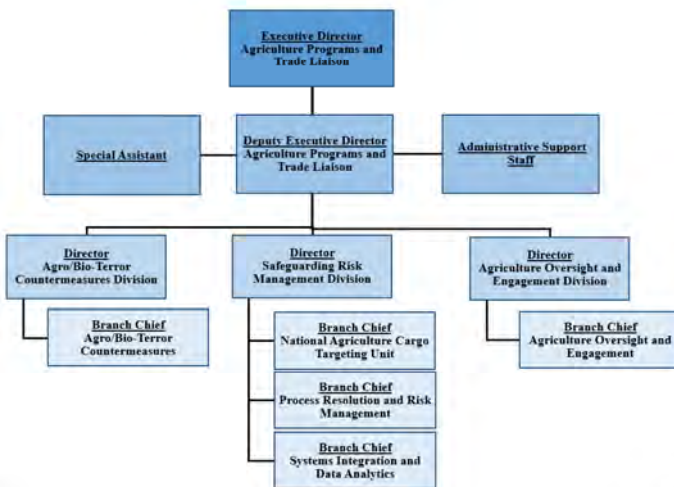
OUR STRATEGIC GOALS - HOW WE WILL DO IT.

- Operationalize Our Partnerships
- Champion Innovation
- Shape the Leaders of Tomorrow
- Modernize Data Operations

A Year in the Life...

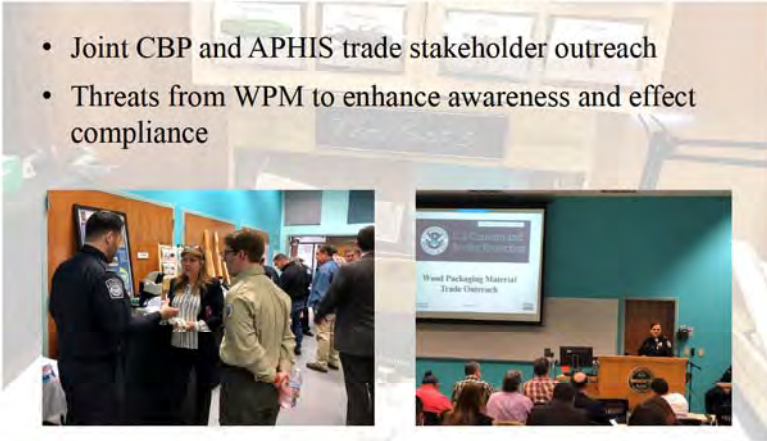
FY 2017

Passenger Inspections	20,212,506
Quarantine Material Interceptions	1,680,784
Cargo Inspections	768,869
Emergency Action Notifications	47,229
Pest Interceptions	
Submitted	132,773
Reportable Pests	58,319



Stakeholder Engagement

- Joint CBP and APHIS trade stakeholder outreach
- Threats from WPM to enhance awareness and effect compliance

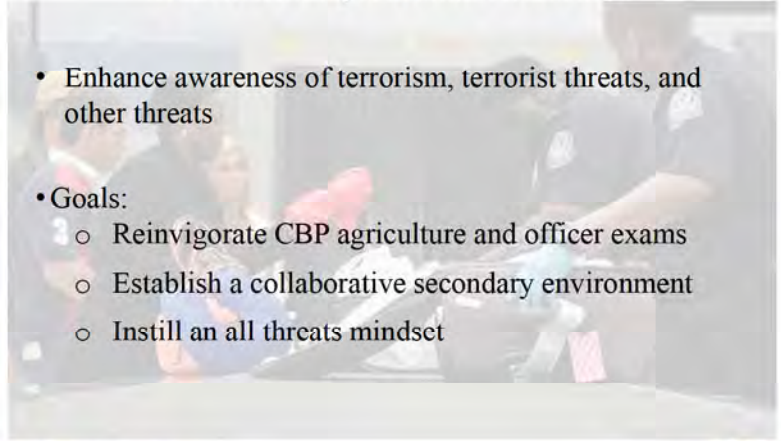


Field Operations



All Threats Operational Awareness

- Enhance awareness of terrorism, terrorist threats, and other threats
- Goals:
 - Reinvigorate CBP agriculture and officer exams
 - Establish a collaborative secondary environment
 - Instill an all threats mindset

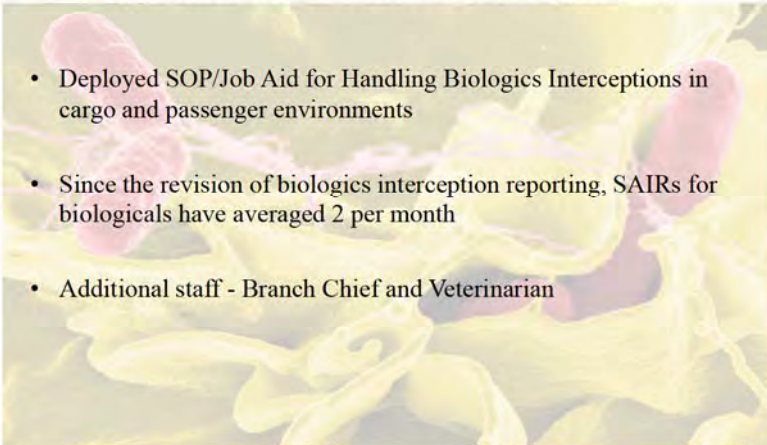


Field Operations



Ag/Bio-Terror Countermeasures (ABTC)

- Deployed SOP/Job Aid for Handling Biologics Interceptions in cargo and passenger environments
- Since the revision of biologics interception reporting, SAIRs for biologics have averaged 2 per month
- Additional staff - Branch Chief and Veterinarian



Field Operations



CBP Discovers Biologics in Boston



DNA samples of Malaria parasites



Field Operations



Import Permit Violation in Dulles

- Plant Import Permit
- Contaminated with soil and insects
- Referred for investigation



Bobo is no Clown

- CBP Agriculture K9 Bobo alerted at JFK mail facility
- Manifested as “herb tea”
- Contained propagative plant material with soil
- First in nation nematode *Rotylenchus usitatus* identified



Proper Permit and Treatment Missing

Container with Walnut, Pine, Cypress, and Teak



Re-exported to origin

Buffalo's "Stem and Bulb V" Operation

- Operation on garlic
- Six shipments inspected
- Two actionable nematodes

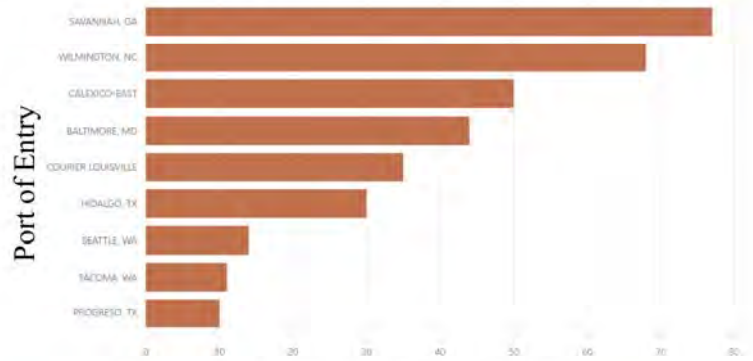


Systems Integration and Data Analytics



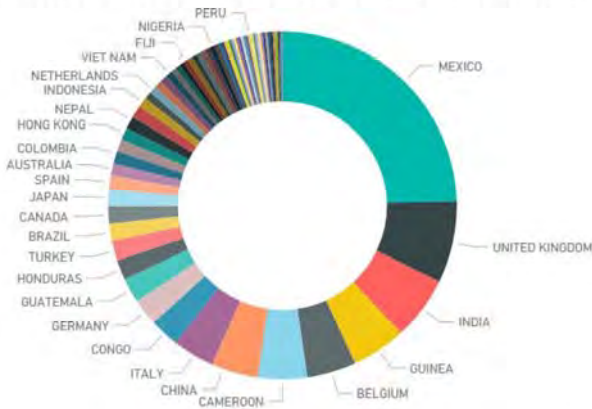
- System development
 - Reduction of redundancy
 - Increase operationalization of data
- Data Analysis
 - Characterizing threats
 - Isolating trends
 - Identifying pathway risk

Data Analytics Allows Us to Ask: How Much?

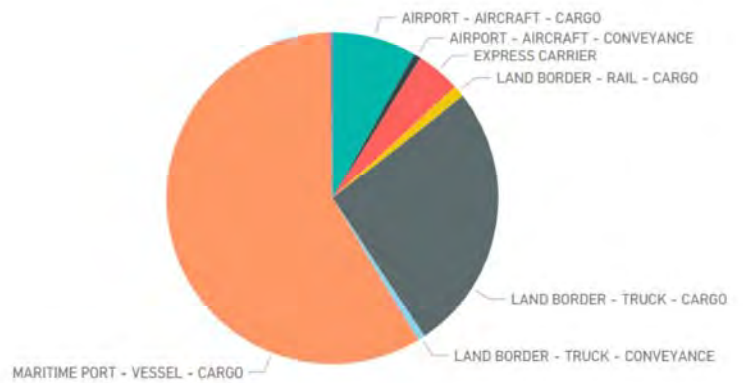


Number of Emergency Action Notifications

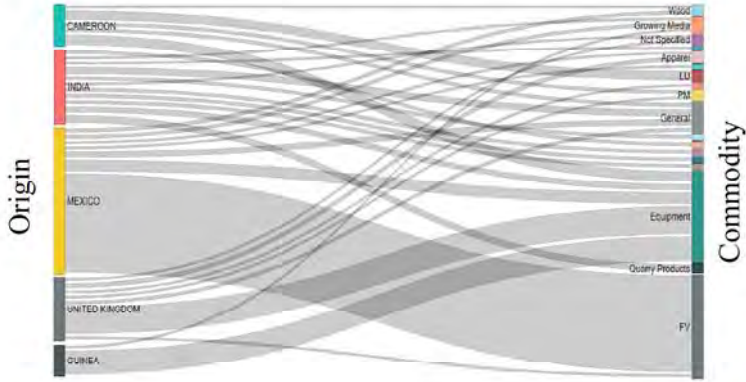
Data Analytics Allows Us to Ask: Where From?



Data Analytics Allows Us to Ask: Pathway?



Data Analytics allows us to ask: What is High Risk?



Asian Longhorned Beetle Program Update

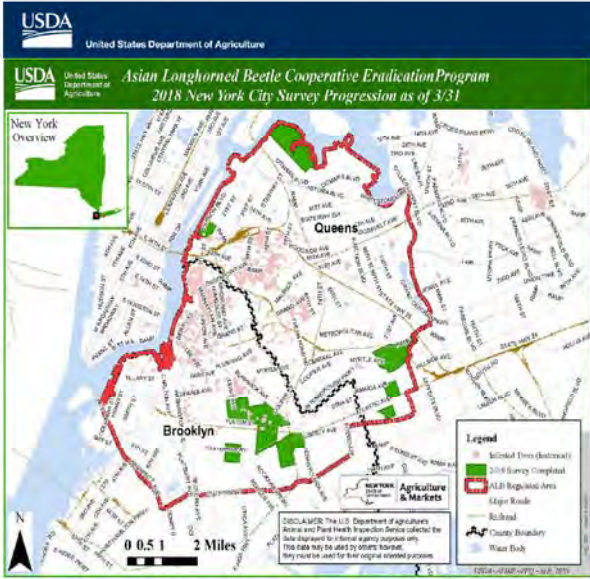
Ryan Vazquez, Program Director- MA.
 USDA/APHIS/PPQ
 ALB Cooperative Eradication Program



1. Ash (Fraxinus)
2. Birch (Betula)
3. Elm (Ulmus)
4. Golden raintree (Koelreuteria)
5. London planetree/sycamore (Platanus)
6. Maple (Acer)
7. Horsechestnut/buckeye (Aesculus)
8. Katsura (Cercidiphyllum)
9. Mimosa (Albizia)
10. Mountain ash (Sorbus)
11. Poplar (Populus)
12. Willow (Salix)



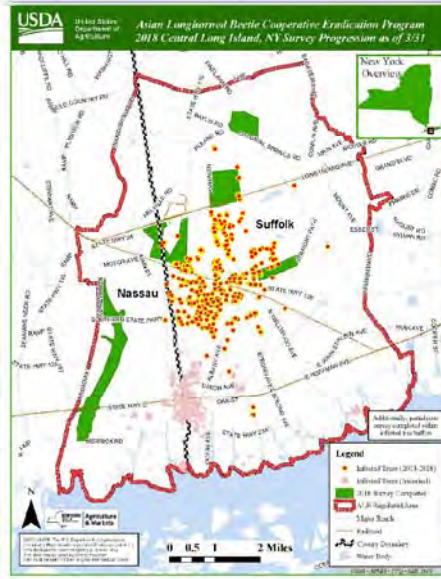
- 111 sq. mile regulated area.
- 7,126 infested trees since 1996.
- 1,178 trees replanted.
- **Deregulation Update:**
 - Islip in 2011.
 - Staten Island and Manhattan in 2013.
 - Eastern Queens in 2017.



New York

Deregulation Goals

- W. Queens-summer 2018
- Brooklyn-summer 2019

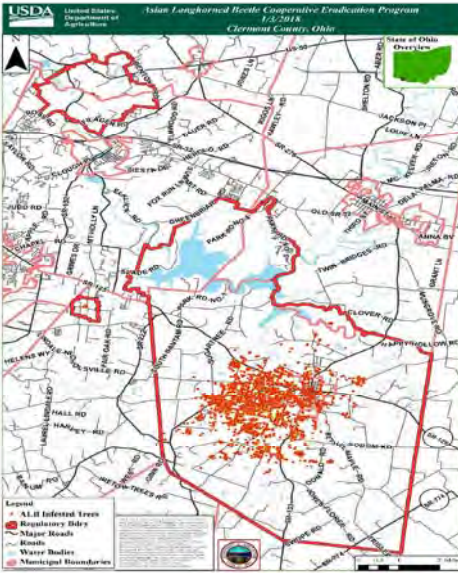


New York

Central Long Island

- Regulated area increased by 2 sq. miles in 2016.
- Projected to finish 1st cycle of survey by late 2018.
- 15 infested trees in 2018.





Ohio

- First detected in 2011.
- 62 sq. mile regulated area.
- 18,978 infested trees detected.
- 2,959 trees replanted.

Ohio

Deregulation Update

Stonelick/Batavia Twp.

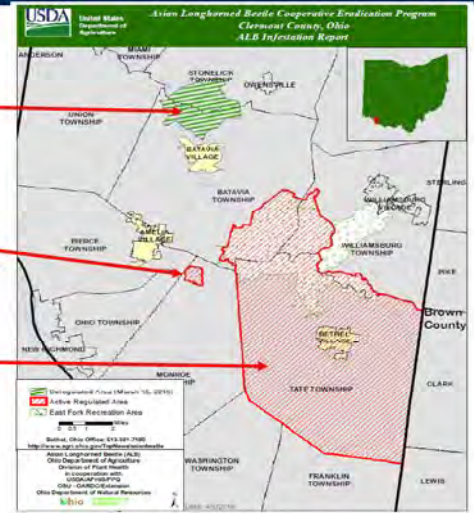
- Deregulated as of 3/15/18.

Monroe Twp.

- Projected Deregulation-late 2018.

Tate Twp. Regulated Area

- Newly Expanded as of 7/10/17.



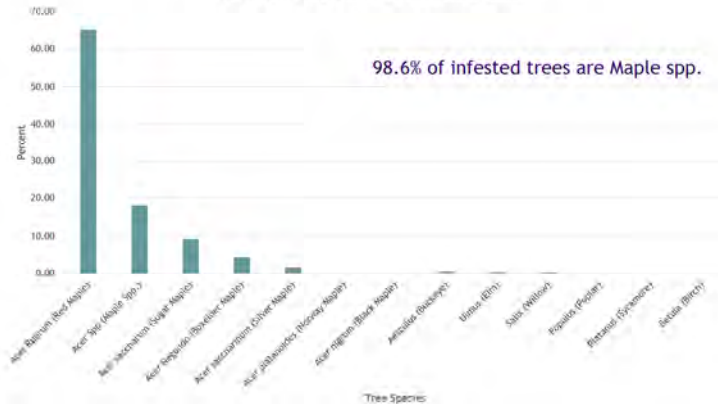
USDA United States Department of Agriculture Ohio

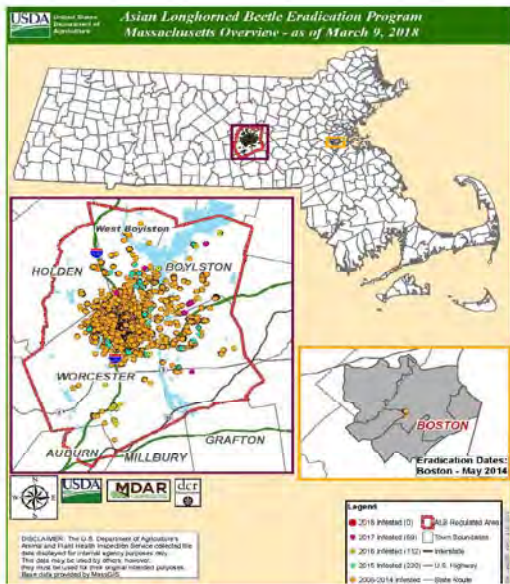
ALB Infested Tree Detections- Ohio



USDA United States Department of Agriculture Ohio

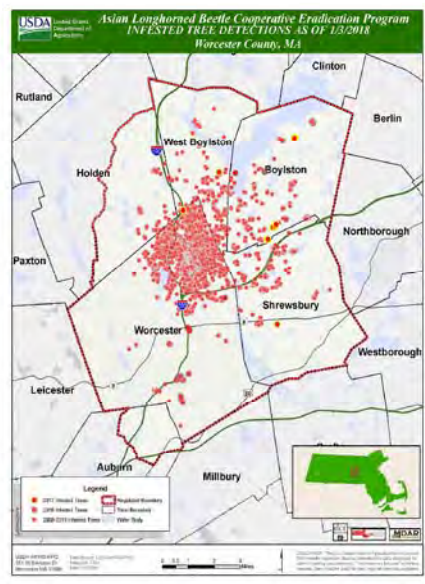
Percent of Host Species Trees Infested- Ohio





Massachusetts

- First detected in Worcester, MA.- August 2008
- Detected in Boston, MA.- July 2010.
- Eradicated from Boston in 2014.

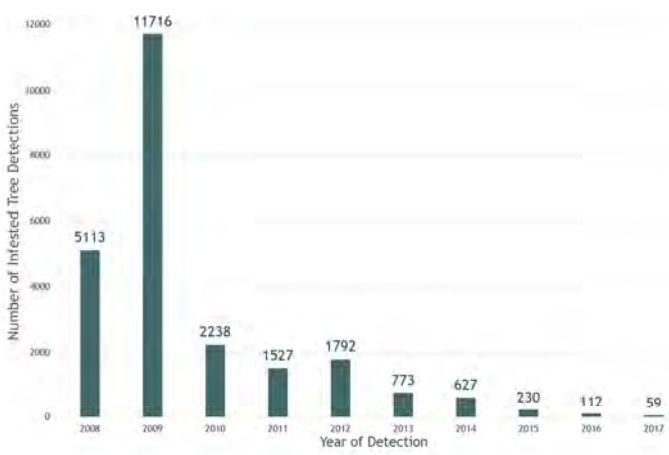


Massachusetts

- Worcester, MA.
- 24,179 infested trees detected since 2008.
 - 50,000+ trees planted.
 - Delimitation survey completed in 2015.
 - Second cycle survey ongoing in Worcester.

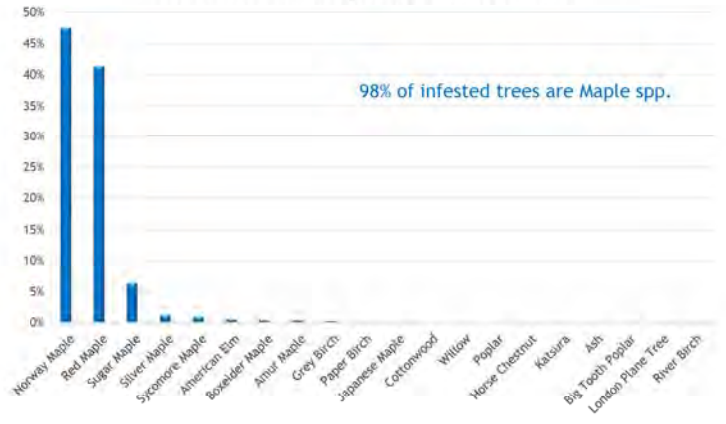
Massachusetts

ALB Infested Tree Detections - Massachusetts



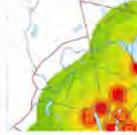
Massachusetts

Percent of Host Species Trees Infested



Risk Assessment: Factors Included in the Model

- Dispersion (Natural)
 - Infested tree infestation level
 - Distance from infested tree
 - Number of dispersing Beetles.
- Wind direction/frequency
- Distance from:
 - Firewood operations
 - Wood storage or disposal sites
- Distance from Major Highways.
- Density of infested trees
- Host Density

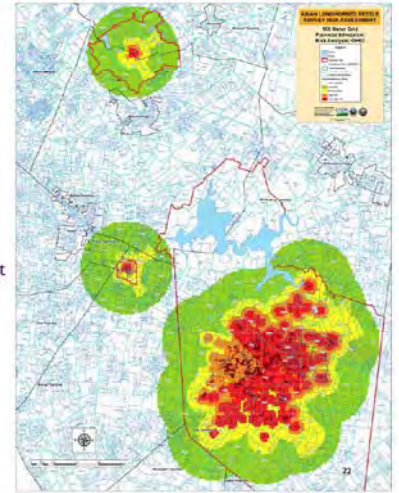


Ohio Risk Assessment

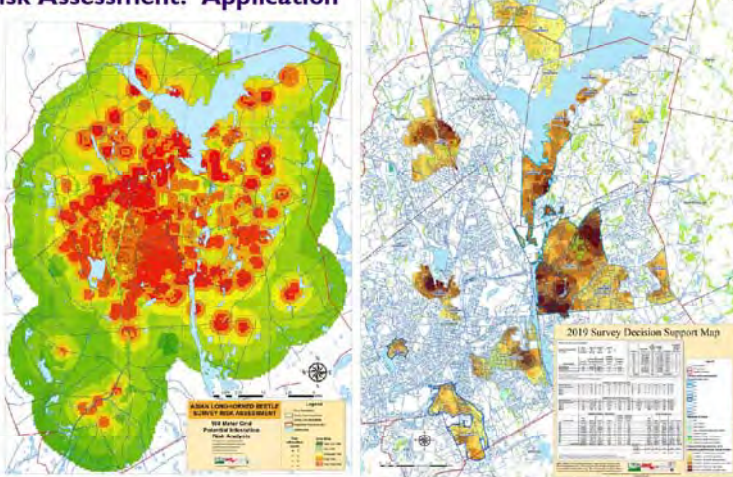
Produced results similar to the Massachusetts results.

- Ohio staff confirmed that infestations in the NWN to far N were due to movement and storage of firewood.
- Dispersion matched the dispersion modeling supplied by USFS.

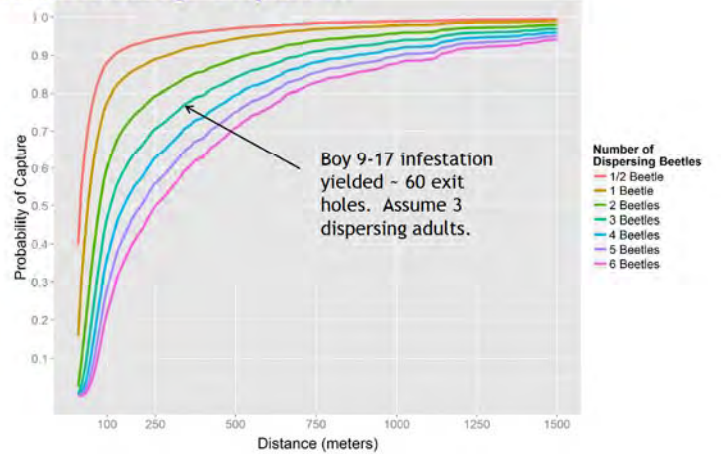
The Ohio model did not include full host removals, treatment areas, or times since last survey.

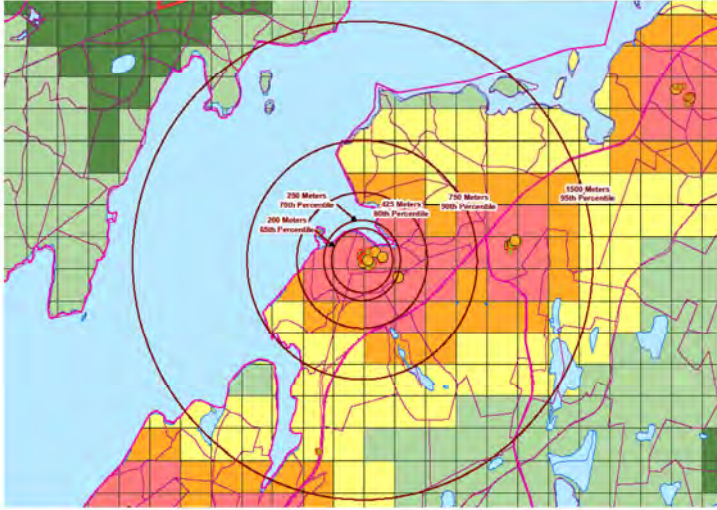


Risk Assessment: Application



Risk Modeling: Dispersion





ALB: Feasibility Study Conducted in Ohio Fall of 2015

- Camera with zoom capability mounted on a gimbal
- Collected high quality photos of evidence of ALB infestation in trees
- Documented damage with photographic data and geospatial reference
- Results indicated UAS will enhance ALB survey methodology



ALB: Test Flight of System Conducted in Massachusetts Fall of 2017

- Camera improved for low light capability and 18X zoom
- UAS platform built for camera and gimbal
- Portable
- Conducted flights in area with 'pseudo sites'
- Headset to enhance viewing while allowing camera operator to maneuver and zoom camera



ALB Pilot Canine Project, New York

- Conduct secondary inspection of survey areas to determine if canines can locate an infestation.
- Inspection of disposal areas/areas under compliance agreements in areas outside the quarantine to determine if a canine could successfully locate ALB frass in those environments
- Inspection of importers who receive goods in solid wood packing material to determine if a canine can detect ALB frass in that environment
- Exposure to the public to increase programmatic awareness.

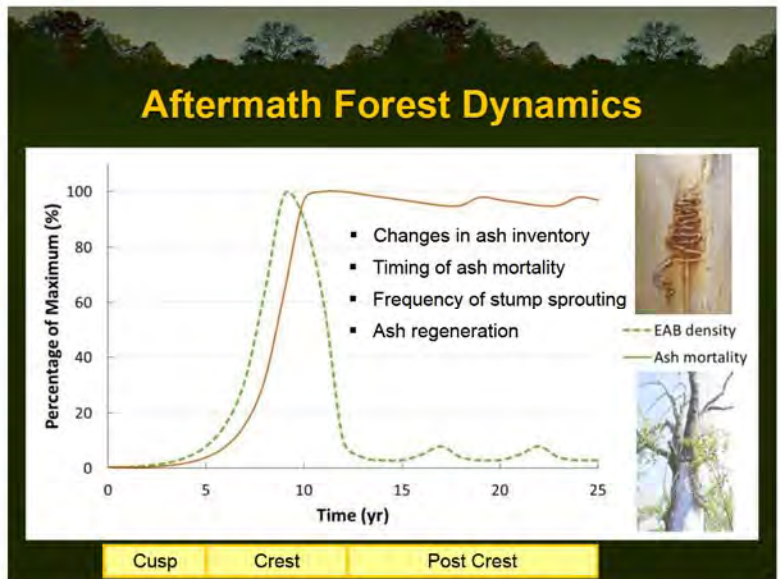
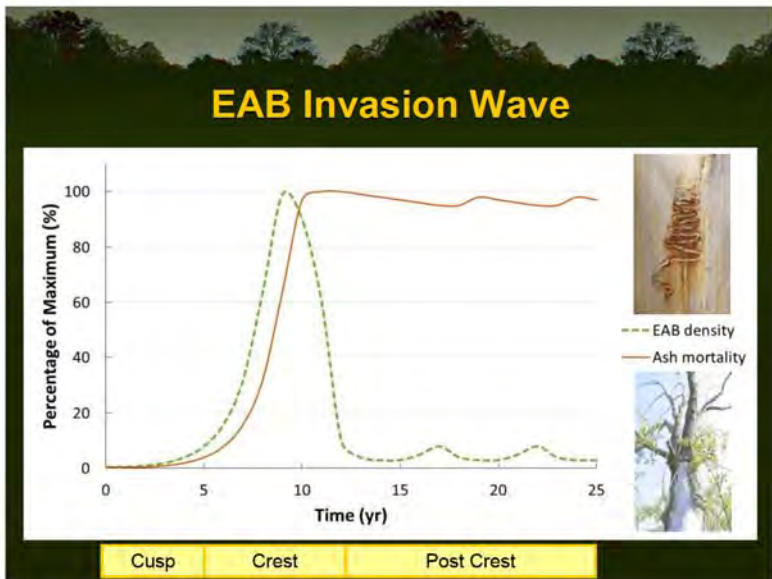


A collage of various resources related to the Asian Longhorned Beetle (ALB). It includes:

- A website banner for AsianLonghornedBeetle.com with the text "DO YOUR TREES SHOW THE SIGNS OF THE ASIAN LONGHORNED BEETLE?" and a close-up of the beetle.
- A screenshot of the aphis.usda.gov website.
- An email sign-up form with the text "Notify Me! Email Updates" and "APHIS Stakeholder Registry".
- A Facebook post from [facebook.com/asianlonghornbeetle](https://www.facebook.com/asianlonghornbeetle) with the headline "MORE THAN 130,000 TREES LOST".
- A Twitter post from twitter.com/StopALB featuring a person looking through a magnifying glass.
- A YouTube video thumbnail with the text "THIS IS WHAT THE ASIAN LONGHORNED BEETLE LOOKS LIKE" and the channel name "AsianLonghorned.Beetle".

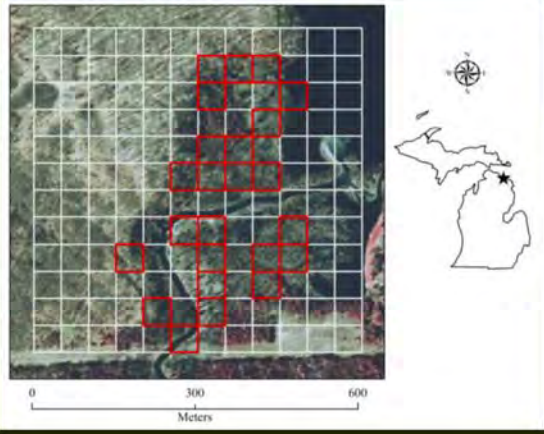
Questions?



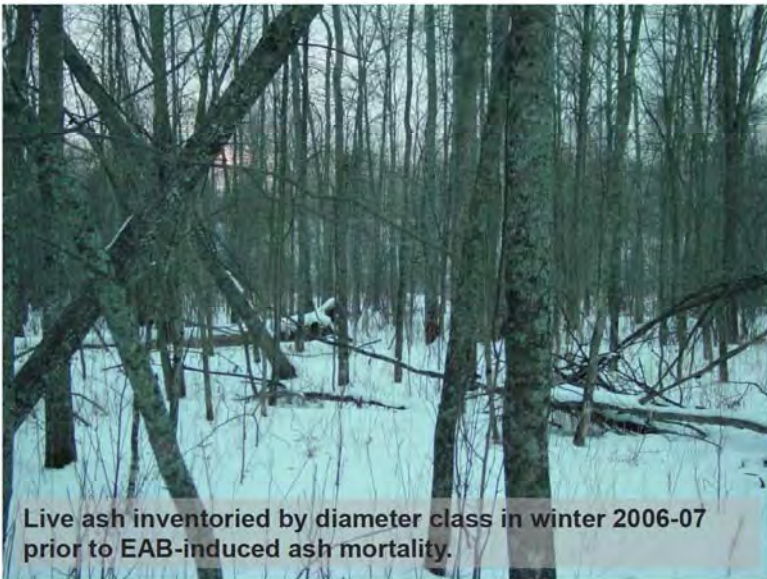


Aftermath Forest Study Site

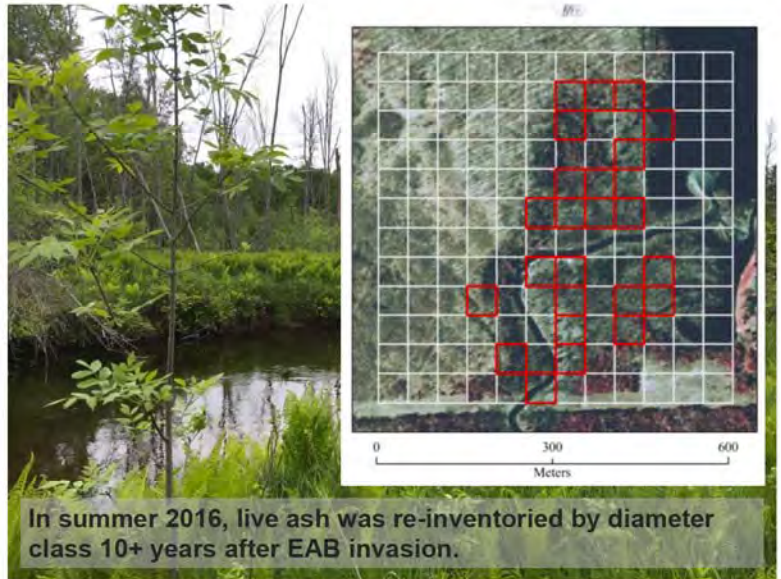
36-ha site
18-ha floodplain
EAB in 2004



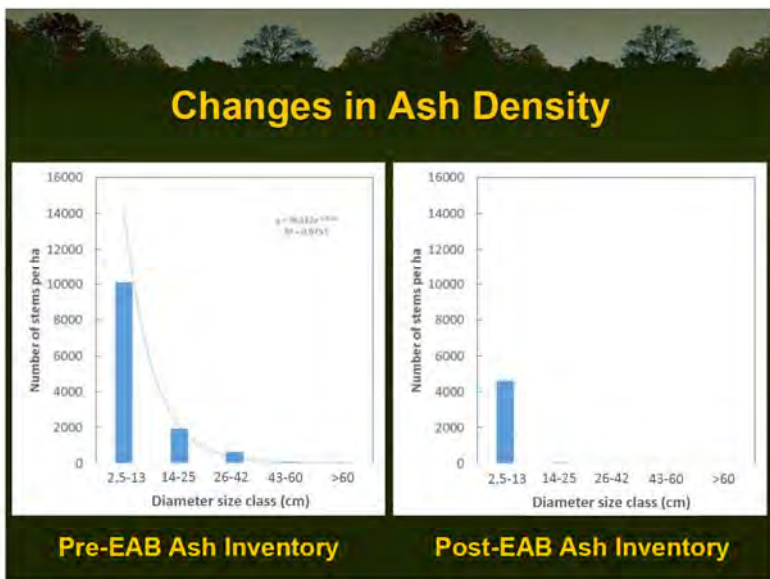
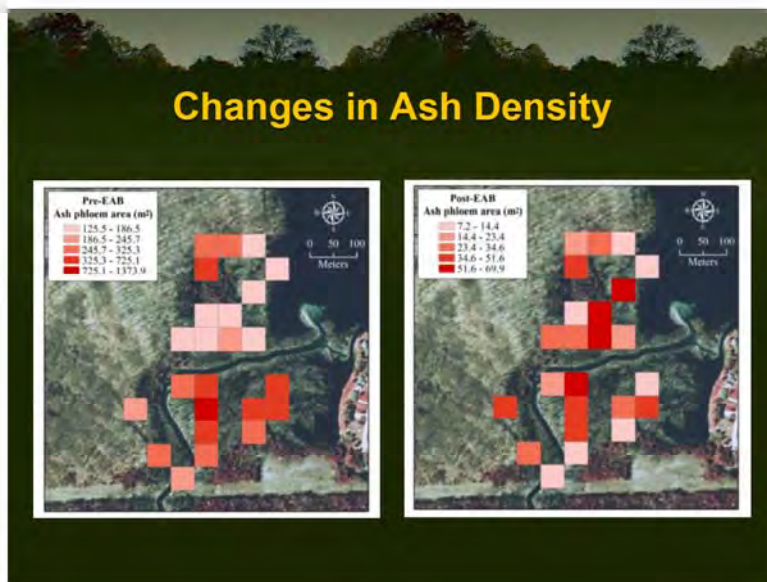
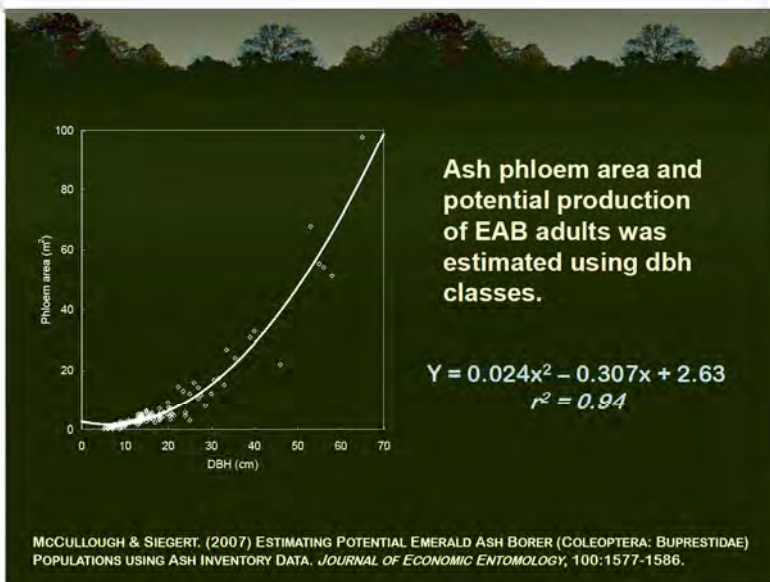
Densities of EAB were at or near infestation levels capable of killing trees, averaging 36.3 ± 9.8 larvae per m^2 .



Live ash inventoried by diameter class in winter 2006-07 prior to EAB-induced ash mortality.



In summer 2016, live ash was re-inventoried by diameter class 10+ years after EAB invasion.



Changes in Ash Density

Ash inventory ^a	Ash diameter class (dbh)					All size classes combined
	2.5 - 13 cm (1 - 5 in)	14 - 25 cm (6 - 10 in)	26 - 42 cm (11 - 17 in)	43 - 60 cm (18 - 23 in)	>60 cm (>23 in)	
pre-EAB No. trees (n)	2,524	480	153	15	1	3,173
Sum of phloem area (m²) ^b	1,648	2,636	3,375	776	87	8,522
Estimated EAB emergence ^c	113,399	285,460	358,467	79,124	8,207	844,658
Ash stem density (ha ⁻¹)	420.7 ± 70.6	80.0 ± 7.8	25.5 ± 5.7	2.5 ± 1.0	0.2 ± 0.2	528.8 ± 78.1
post-EAB No. trees (n)	1,158	7	0	0	0	1,165
Sum of phloem area (m²) ^b	756	38	0	0	0	795
Estimated EAB emergence ^c	52,027	4,163	0	0	0	56,190
Ash stem density (ha ⁻¹)	193.0 ± 26.2	1.2 ± 0.6	0	0	0	194.2 ± 26.0

^a Ash inventory collected in 2007 before EAB-induced ash mortality and again in 2016 10+ years after EAB infestation.
^b Phloem area of trees estimated using methods developed by McCullough and Siegert (2007).
^c Potential production of EAB adults based on diameter class-specific estimates (McCullough and Siegert 2007).

While the number of stems per plot was reduced by an average of 50.9%, the amount of ash phloem per plot was reduced by an average of 87.7% following EAB invasion.

Post-EAB Ash Species

Ash spp. ^a	Ash diameter class (dbh)					All size classes combined
	2.5 - 13 cm (1 - 5 in)	14 - 25 cm (6 - 10 in)	26 - 42 cm (11 - 17 in)	43 - 60 cm (18 - 23 in)	>60 cm (>23 in)	
Green ash No. trees (n)	738	0	0	0	0	738
Sum of phloem area (m ²) ^b	482	0	0	0	0	482
Estimated EAB emergence	33,157	0	0	0	0	33,157
Ash stem density (ha ⁻¹)	155.4 ± 30.5	0	0	0	0	155.4 ± 30.5
Black ash No. trees (n)	280	0	0	0	0	280
Sum of phloem area (m ²) ^b	183	0	0	0	0	183
Estimated EAB emergence	12,580	0	0	0	0	12,580
Ash stem density (ha ⁻¹)	86.2 ± 27.1	0	0	0	0	86.2 ± 27.1
White ash No. trees (n)	140	7	0	0	0	147
Sum of phloem area (m ²) ^b	91	38	0	0	0	130
Estimated EAB emergence	6,290	4,163	0	0	0	10,453
Ash stem density (ha ⁻¹)	93.3 ± 47.4	4.7 ± 1.9	0	0	0	98.0 ± 46.2

Ash Chronology & Mortality

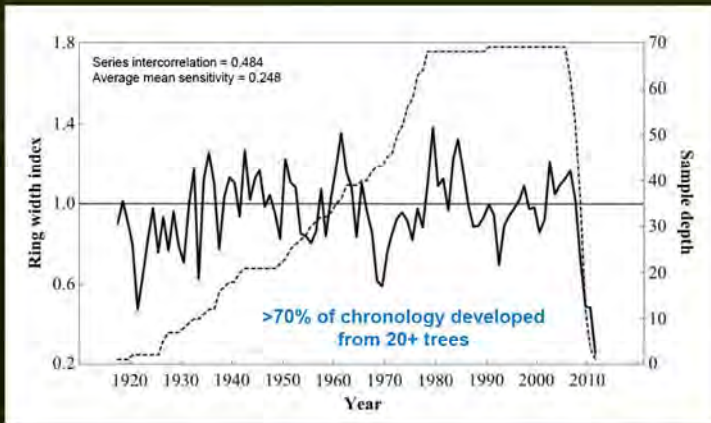


Increment cores were collected from 3 trees per plot (n = 72 trees).

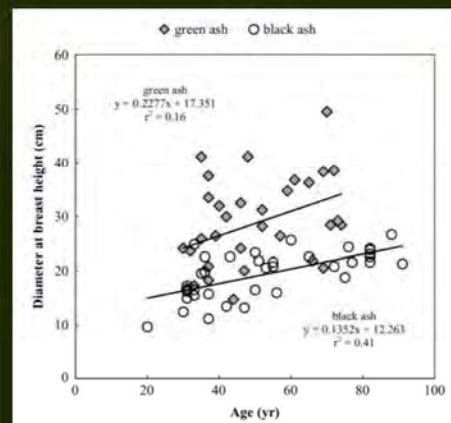
36 black ash, 33 green ash

Crossdated to live ash chronology developed in 2008.

Ash Chronology & Mortality



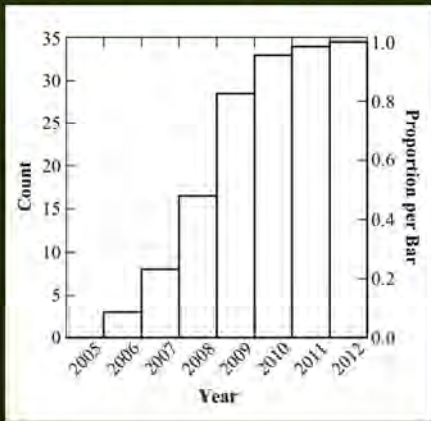
Ash Radial Growth



Green ash growth greater, but more variable, than black ash growth.

Both species had similar increases in dbh over time.

Ash Chronology & Mortality



Post-EAB Stump Sprouting



Stump sprouting has been suggested as a means to regenerate ash after EAB invasion.

Plots were crisscrossed and 10 dead ash trees were evaluated for surviving stump sprouts (n = 240 trees).

Green ash and black ash were assessed.

No Surviving Black Ash Stump Sprouts



Surviving Green Ash Stump Sprouts

Plot	Mean (±SE) tree dbh (cm)	Range tree dbh (cm)	Percentage trees with live sprouts	Mean (±SE) no. live sprouts	Range no. live sprouts	Mean (±SE) live sprouts dbh (cm)	Range live sprouts dbh (cm)
7	23.2 ± 2.7	10.5 - 35.1	50	1.1 ± 0.5	0 - 4	0.9 ± 0.3	0.8 - 3.6
18	25.2 ± 3.7	7.9 - 41.1	20	0.2 ± 0.1	0 - 1	2.0 ± 1.7	3.8 - 16.5
20	19.4 ± 2.9	6.1 - 37.6	10	0.2 ± 0.2	0 - 2	0.2 ± 0.2	0.8 - 3.3
28	12.5 ± 2.1	6.6 - 30.0	40	0.9 ± 0.5	0 - 5	0.4 ± 0.2	0.3 - 2.3
30	16.1 ± 3.7	4.4 - 38.4	20	0.4 ± 0.3	0 - 3	0.4 ± 0.4	0.8 - 4.6
39	18.6 ± 4.2	6.9 - 47.0	40	0.9 ± 0.4	0 - 3	1.1 ± 0.5	0.6 - 4.3
40	16.9 ± 3.7	5.8 - 45.2	40	1.1 ± 0.5	0 - 4	0.9 ± 0.4	0.6 - 5.8
42	17.1 ± 2.8	8.1 - 30.7	40	1.1 ± 0.6	0 - 6	1.0 ± 0.4	0.8 - 6.6
51	13.7 ± 1.6	8.1 - 22.1	40	1.9 ± 0.8	0 - 7	0.9 ± 0.4	0.6 - 4.0
54	10.5 ± 0.9	7.6 - 16.8	20	0.2 ± 0.1	0 - 1	0.2 ± 0.2	1.2 - 1.4
55	17.4 ± 2.6	8.5 - 31.0	20	0.3 ± 0.2	0 - 2	0.6 ± 0.5	1.2 - 5.8

Surviving Green Ash Stump Sprouts

Plot	Mean (±SE) tree dbh (cm)	Range tree dbh (cm)	Percentage trees with live sprouts	Mean (±SE) no. live sprouts	Range no. live sprouts	Mean (±SE) live sprouts dbh (cm)	Range live sprouts dbh (cm)
7	23.2 ± 2.7	10.5 - 35.1	50	1.1 ± 0.5	0 - 4	0.9 ± 0.3	0.8 - 3.6
18	25.2 ± 3.7	7.9 - 41.1	20	0.2 ± 0.1	0 - 1	2.0 ± 1.7	3.8 - 16.5
20	19.4 ± 2.9	6.1 - 37.6	10	0.2 ± 0.2	0 - 2	0.2 ± 0.2	0.8 - 3.3
28	12.5 ± 2.1	6.6 - 30.0	40	0.9 ± 0.5	0 - 5	0.4 ± 0.2	0.3 - 2.3
30	16.1 ± 3.7	4.4 - 38.4	20	0.4 ± 0.3	0 - 3	0.4 ± 0.4	0.8 - 4.6
39	18.6 ± 4.2	6.9 - 47.0	40	0.9 ± 0.4	0 - 3	1.1 ± 0.5	0.6 - 4.3
40	16.9 ± 3.7	5.8 - 45.2	40	1.1 ± 0.5	0 - 4	0.9 ± 0.4	0.6 - 5.8
42	17.1 ± 2.8	8.1 - 30.7	40	1.1 ± 0.6	0 - 6	1.0 ± 0.4	0.8 - 6.6
51	13.7 ± 1.6	8.1 - 22.1	40	1.9 ± 0.8	0 - 7	0.9 ± 0.4	0.6 - 4.0
54	10.5 ± 0.9	7.6 - 16.8	20	0.2 ± 0.1	0 - 1	0.2 ± 0.2	1.2 - 1.4
55	17.4 ± 2.6	8.5 - 31.0	20	0.3 ± 0.2	0 - 2	0.6 ± 0.5	1.2 - 5.8

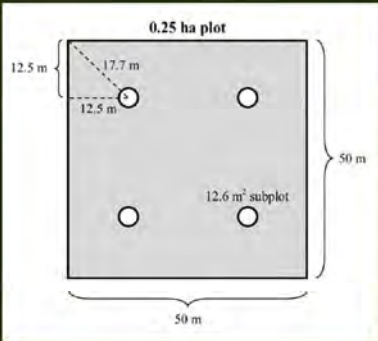
Surviving Green Ash Stump Sprouts

Plot	Mean (±SE) tree dbh (cm)	Range tree dbh (cm)	Percentage trees with live sprouts	Mean (±SE) no. live sprouts	Range no. live sprouts	Mean (±SE) live sprouts dbh (cm)	Range live sprouts dbh (cm)
7	23.2 ± 2.7	10.5 - 35.1	50	1.1 ± 0.5	0 - 4	0.9 ± 0.3	0.8 - 3.6
18	25.2 ± 3.7	7.9 - 41.1	20	0.2 ± 0.1	0 - 1	2.0 ± 1.7	3.8 - 16.5
20	19.4 ± 2.9	6.1 - 37.6	10	0.2 ± 0.2	0 - 2	0.2 ± 0.2	0.8 - 3.3
28	12.5 ± 2.1	6.6 - 30.0	40	0.9 ± 0.5	0 - 5	0.4 ± 0.2	0.3 - 2.3
30	16.1 ± 3.7	4.4 - 38.4	20	0.4 ± 0.3	0 - 3	0.4 ± 0.4	0.8 - 4.6
39	18.6 ± 4.2	6.9 - 47.0	40	0.9 ± 0.4	0 - 3	1.1 ± 0.5	0.6 - 4.3
40	16.9 ± 3.7	5.8 - 45.2	40	1.1 ± 0.5	0 - 4	0.9 ± 0.4	0.6 - 5.8
42	17.1 ± 2.8	8.1 - 30.7	40	1.1 ± 0.6	0 - 6	1.0 ± 0.4	0.8 - 6.6
51	13.7 ± 1.6	8.1 - 22.1	40	1.9 ± 0.8	0 - 7	0.9 ± 0.4	0.6 - 4.0
54	10.5 ± 0.9	7.6 - 16.8	20	0.2 ± 0.1	0 - 1	0.2 ± 0.2	1.2 - 1.4
55	17.4 ± 2.6	8.5 - 31.0	20	0.3 ± 0.2	0 - 2	0.6 ± 0.5	1.2 - 5.8

Surviving Green Ash Stump Sprouts

Plot	Mean (±SE) tree dbh (cm)	Range tree dbh (cm)	Percentage trees with live sprouts	Mean (±SE) no. live sprouts	Range no. live sprouts	Mean (±SE) live sprouts dbh (cm)	Range live sprouts dbh (cm)
7	23.2 ± 2.7	10.5 - 35.1	50	1.1 ± 0.5	0 - 4	0.9 ± 0.3	0.8 - 3.6
18	25.2 ± 3.7	7.9 - 41.1	20	0.2 ± 0.1	0 - 1	2.0 ± 1.7	3.8 - 16.5
20	19.4 ± 2.9	6.1 - 37.6	10	0.2 ± 0.2	0 - 2	0.2 ± 0.2	0.8 - 3.3
28	12.5 ± 2.1	6.6 - 30.0	40	0.9 ± 0.5	0 - 5	0.4 ± 0.2	0.3 - 2.3
30	16.1 ± 3.7	4.4 - 38.4	20	0.4 ± 0.3	0 - 3	0.4 ± 0.4	0.8 - 4.6
39	18.6 ± 4.2	6.9 - 47.0	40	0.9 ± 0.4	0 - 3	1.1 ± 0.5	0.6 - 4.3
40	16.9 ± 3.7	5.8 - 45.2	40	1.1 ± 0.5	0 - 4	0.9 ± 0.4	0.6 - 5.8
42	17.1 ± 2.8	8.1 - 30.7	40	1.1 ± 0.6	0 - 6	1.0 ± 0.4	0.8 - 6.6
51	13.7 ± 1.6	8.1 - 22.1	40	1.9 ± 0.8	0 - 7	0.9 ± 0.4	0.6 - 4.0
54	10.5 ± 0.9	7.6 - 16.8	20	0.2 ± 0.1	0 - 1	0.2 ± 0.2	1.2 - 1.4
55	17.4 ± 2.6	8.5 - 31.0	20	0.3 ± 0.2	0 - 2	0.6 ± 0.5	1.2 - 5.8

Post-EAB Ash Regeneration



Ash regeneration quantified in 4 subplots in each of the 0.25 ha plots.

Saplings: <2.5 cm dbh, greater than 1 m in height.

Seedlings: less than 1 m in height.

Non-ash species also quantified in subplots.

Post-EAB Ash Regeneration



Saplings (>1 m)



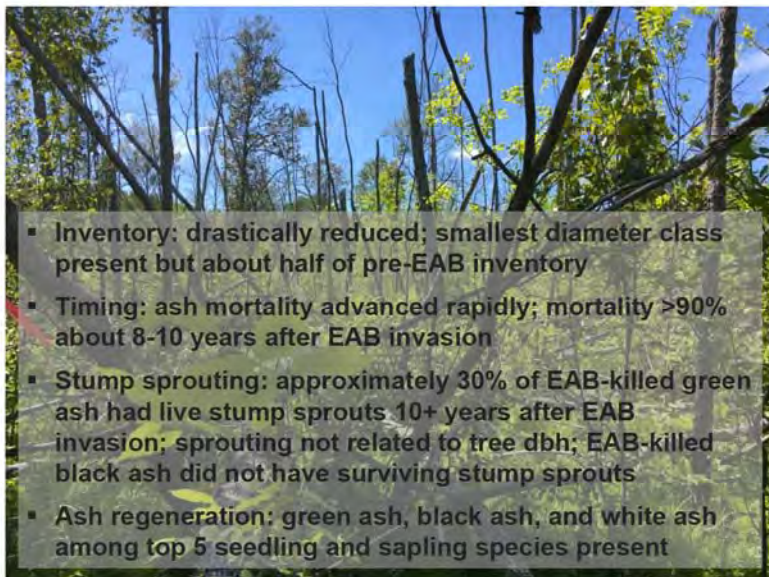
Seedlings (<1 m)



Post-EAB Ash Regeneration

Stage	Species	Total number	Percentage plots present	Mean (±SE) no. stems (ha ⁻¹)
Saplings	Green ash	145	70.8	1199 ± 269
	Balsam poplar	109	54.2	901 ± 308
	Black ash	40	45.8	331 ± 146
	White ash	22	12.5	182 ± 131
	American elm	3	12.5	25 ± 14
Seedlings	Black ash	770	50.0	6366 ± 2169
	Green ash	238	79.2	1968 ± 419
	White ash	144	20.8	1190 ± 967
	Red maple	51	25.0	422 ± 208
	Balsam poplar	43	37.5	355 ± 141

Summary of EAB Impacts

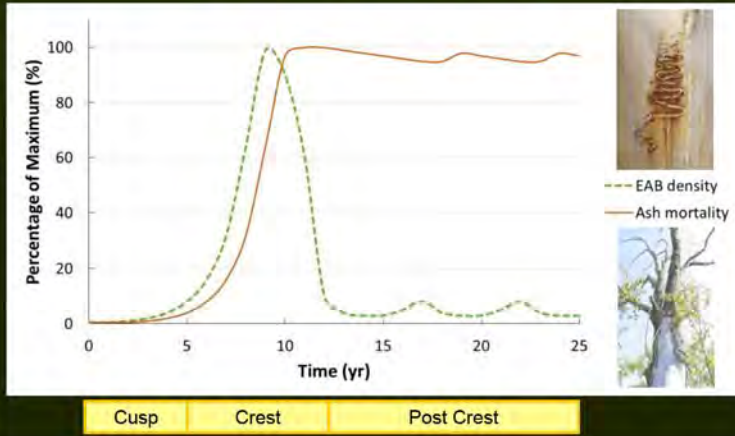


- **Inventory:** drastically reduced; smallest diameter class present but about half of pre-EAB inventory
- **Timing:** ash mortality advanced rapidly; mortality >90% about 8-10 years after EAB invasion
- **Stump sprouting:** approximately 30% of EAB-killed green ash had live stump sprouts 10+ years after EAB invasion; sprouting not related to tree dbh; EAB-killed black ash did not have surviving stump sprouts
- **Ash regeneration:** green ash, black ash, and white ash among top 5 seedling and sapling species present

Current Pressure on Ash Dynamics

- EAB pressure over time and effect on ash dynamics.

EAB Invasion Wave



Current Pressure on Ash Dynamics

- EAB pressure over time and effect on ash dynamics.
- Deer browse heavily impacts growth of ash seedlings, saplings, and stump sprouts.



Current Pressure on Ash Dynamics

- EAB pressure over time and effect on ash dynamics.
- Deer browse heavily impacts growth of ash seedlings, saplings, and stump sprouts.
- Loss of overstory ash may affect water table and establishment of invasive plants, which in turn affects residual trees and stress/survival of regeneration.



Current Pressure on Ash Dynamics

- EAB pressure over time and effect on ash dynamics.
- Deer browse heavily impacts growth of ash seedlings, saplings, and stump sprouts.
- Loss of overstory ash may affect water table and establishment of invasive plants, which in turn affects residual trees and stress/survival of regeneration.
- Loss of ash seed source.



Current Pressure on Ash Dynamics

- EAB pressure over time and effect on ash dynamics.
- Deer browse heavily impacts growth of ash seedlings, saplings, and stump sprouts.
- Loss of overstory ash may affect water table and establishment of invasive plants, which in turn affects residual trees and stress/survival of regeneration.
- Loss of ash seed source.
- Strategies for ash management in post-crest forests will need to be developed and evaluated.

www.emeraldashborer.info



nwsiegert@fs.fed.us

Animal and Plant Health
Inspection Service

Ben Slager
Acting National Operations Manager

April 10, 2018



The Emerald Ash Borer

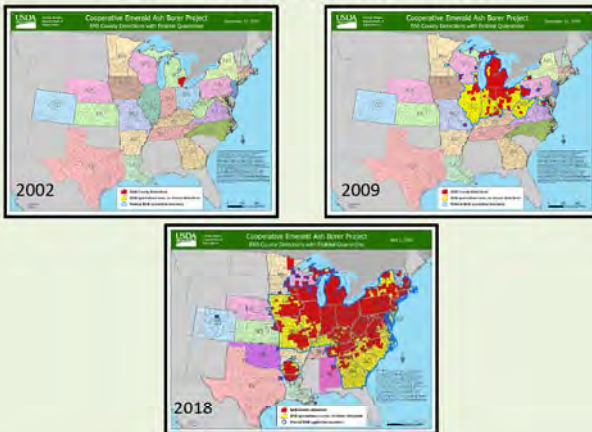
The Emerald Ash Borer Program



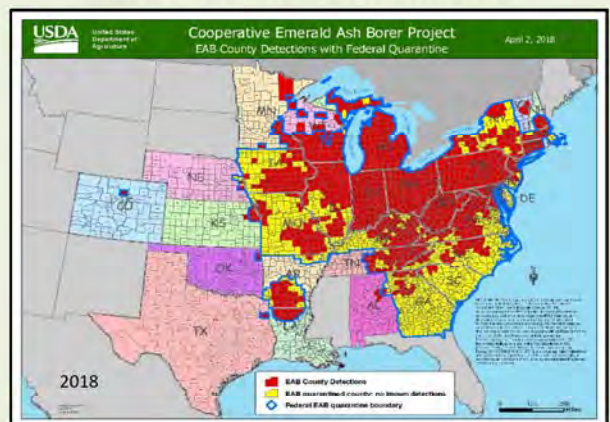
Maintain Ash as a Viable Part
of the American Landscape



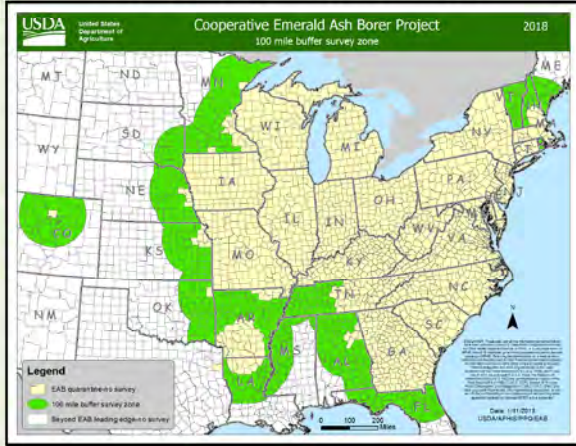
EAB Federal Quarantine



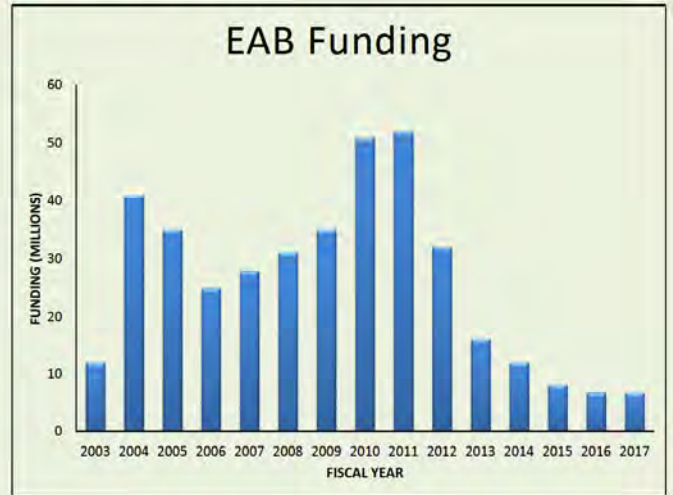
EAB Federal Quarantine



2018 Trap Placements



EAB Funding



Proposed Rule

regulations.gov
 Make a difference. Submit your comments and let your voice be heard.
 What's Trending

NPB national plant board
 NASDA
 FOREST SERVICE US DEPARTMENT OF AGRICULTURE
 NATIONAL ASSOCIATION OF STATE FORESTERS FOUNDED 1920
 Continental Dialogue on Non-Native Forest Insects & Diseases
 NATIVE AMERICAN PRODUCERS AND TRIBES

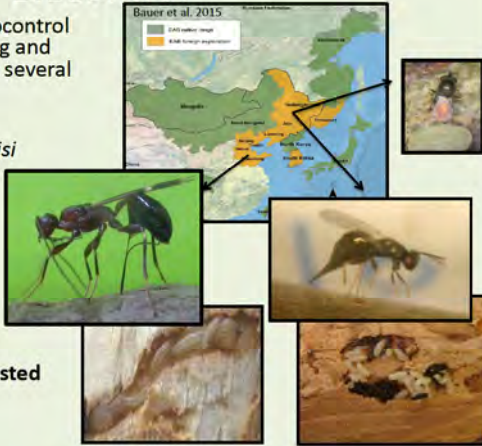
Biocontrol

• Since 2009 the EAB Biocontrol facility has been rearing and distributing for release several parasitoids.

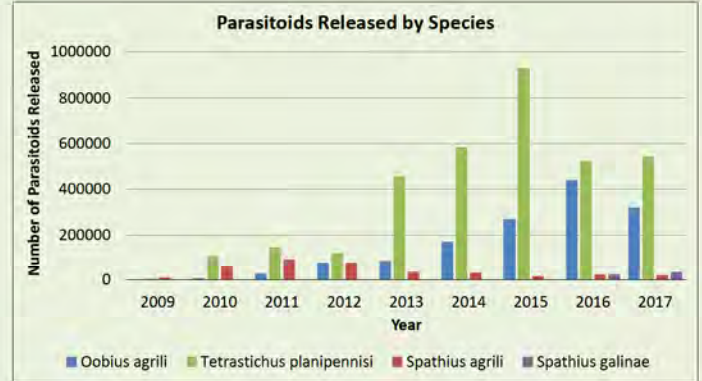
- *Tetrastichus planipennis*
- *Spathius agrili*
- *Oobius agrili*

- *Spathius galinae*
(since 2015)

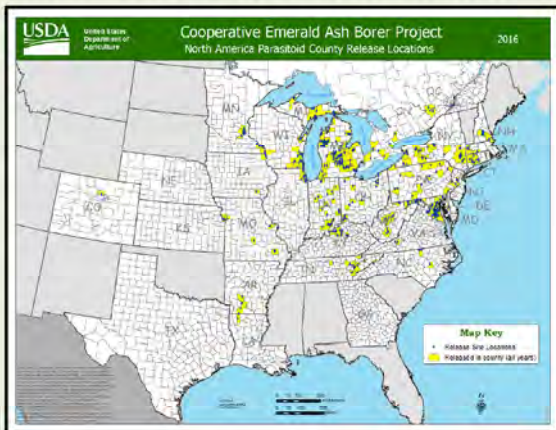
The goal is to release parasitoids within all infested counties.



Biocontrol



Parasitoid Releases in 25 of 32 Infested States



EAB Parasitoids



Summary

- Regulatory program has slowed, but not stopped the movement of EAB
- Parasitoid releases and establishment of self-sustaining populations of parasitoids are critical to achieving the overall program objective
- Program updates will be shared on the EAB page and APHIS stakeholder registry

EAB CFWG

Policy: Robyn Rose

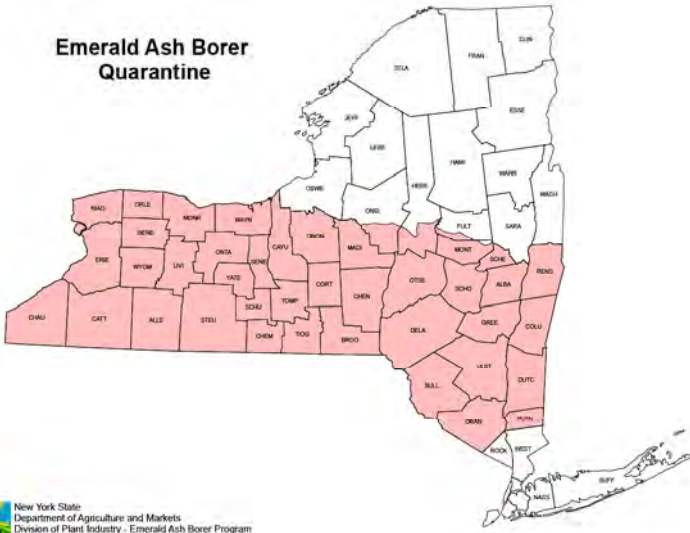
FO: Joe Beckwith - NOM
Greg Aydelotte - Acting NOM
Ben Slager - Acting NOM
Doug Bopp - GIS
Jim Buck - Program Analyst

S&T: Scott Pfister - Lab Director
Juli Gould - Research Scientist

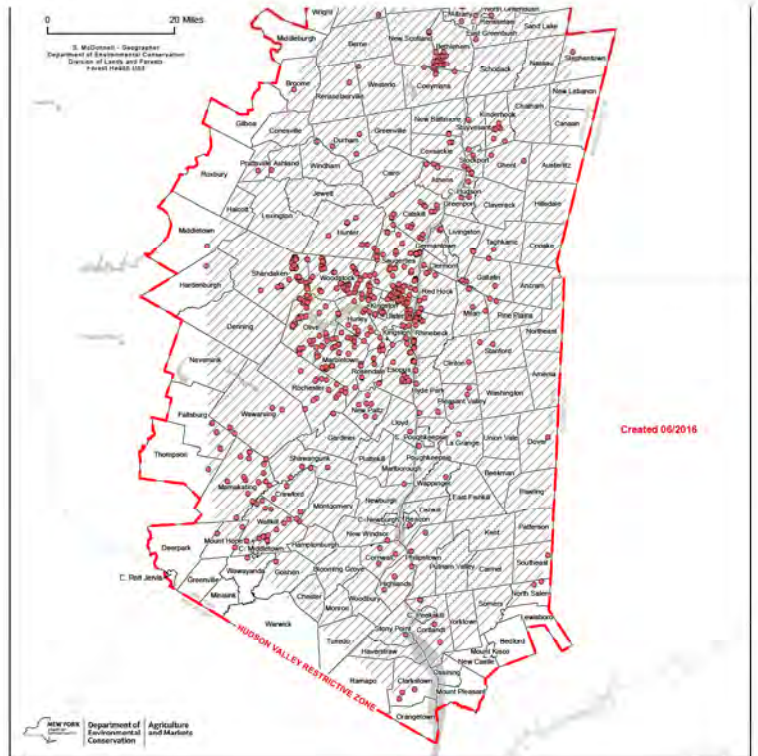
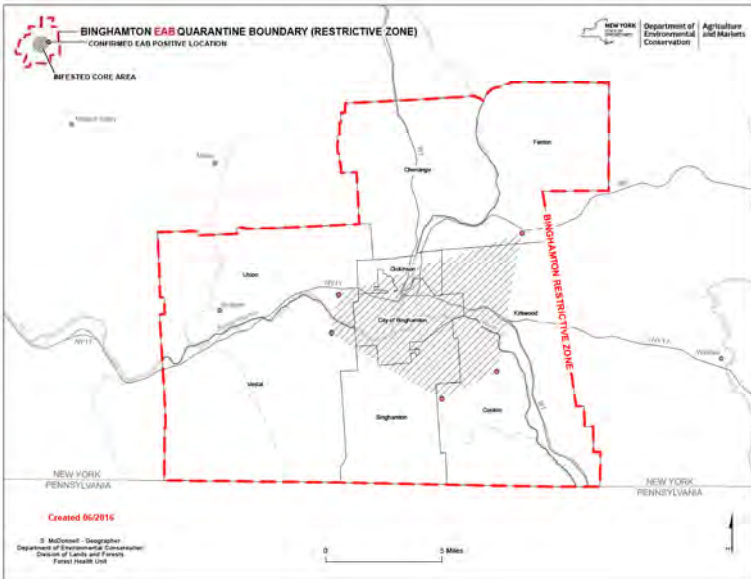
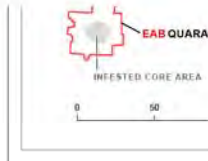
LPA: Rhonda Santos - Public Affairs Specialist

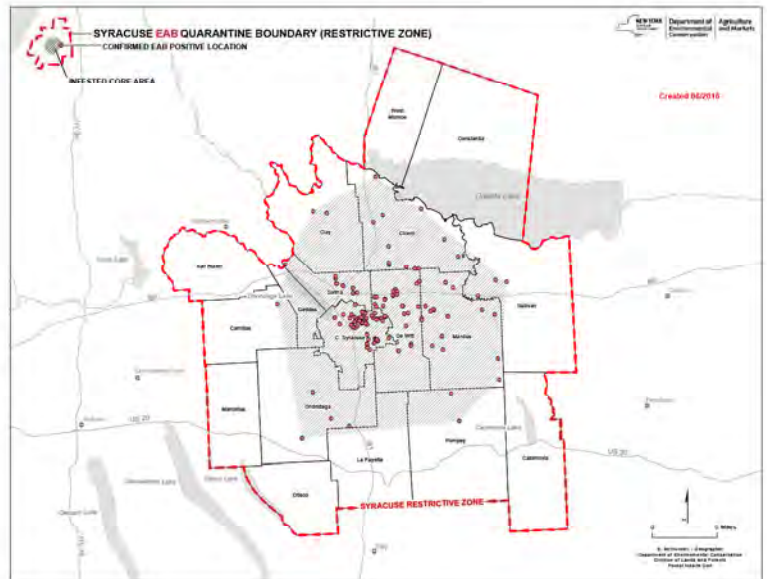
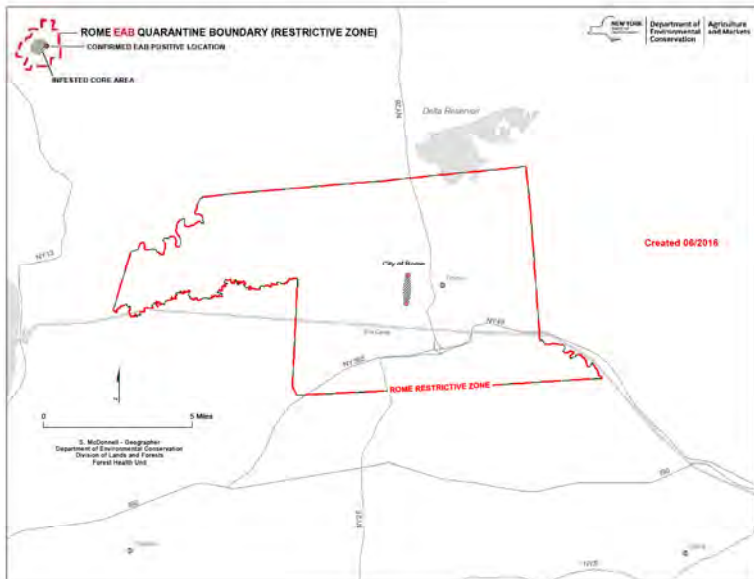
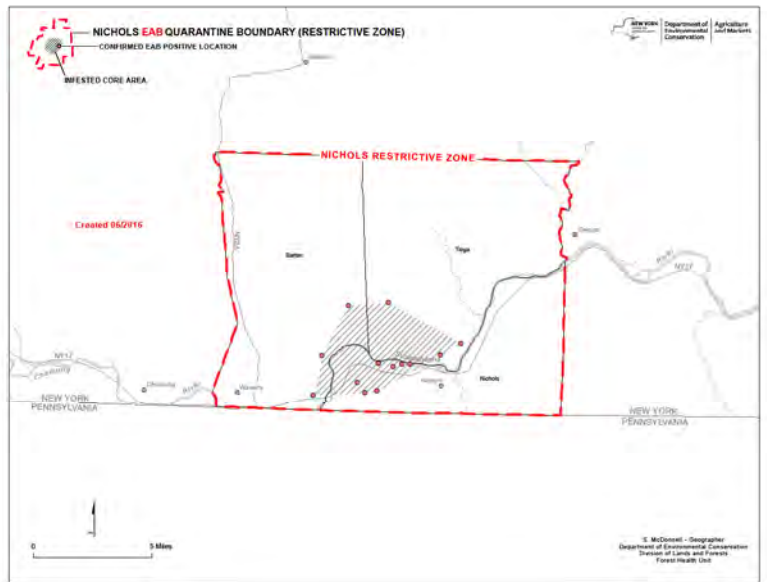
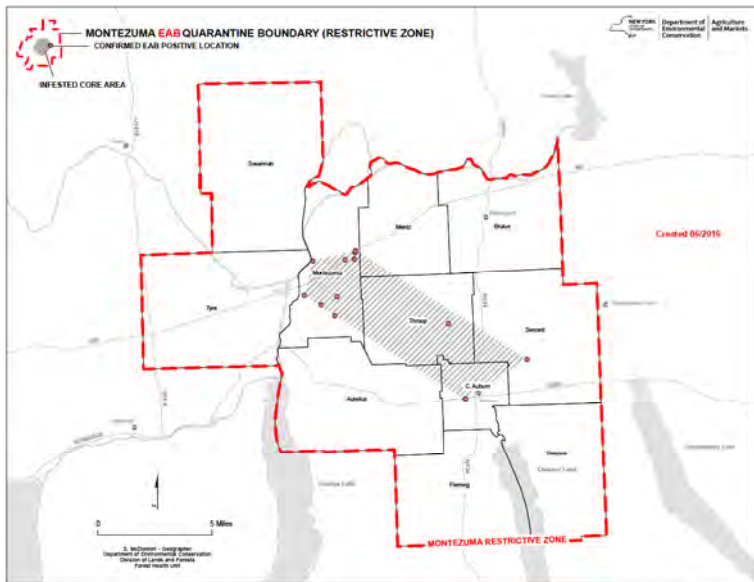
ODA: Sharon Lucik - Communications Specialist

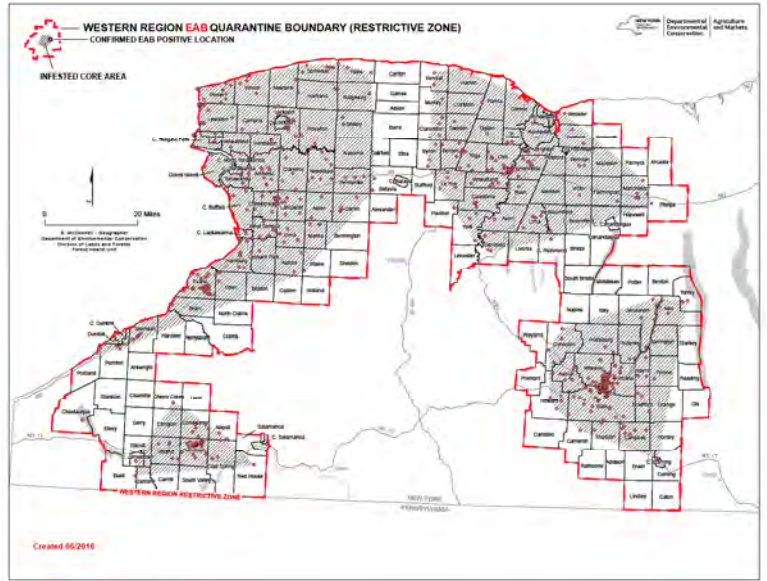
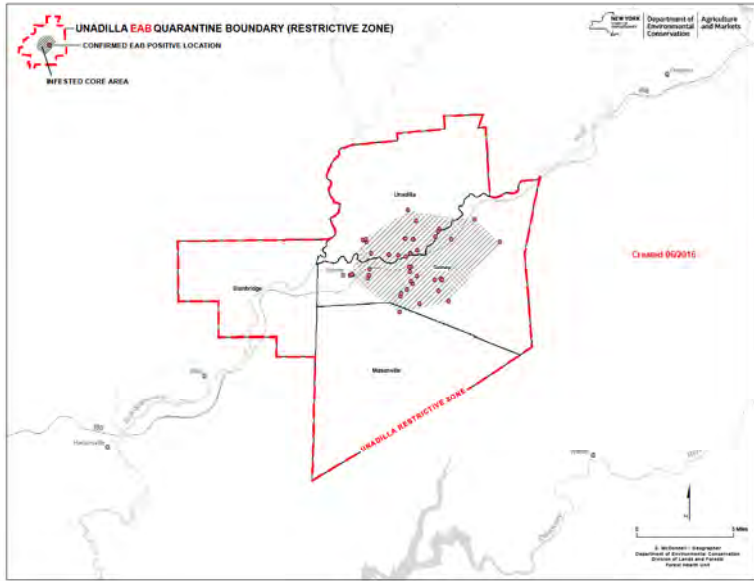
Emerald Ash Borer Quarantine



New York State
Department of Agriculture and Markets
Division of Plant Industry - Emerald Ash Borer Program
April 2014









NATHAN W. SIEGERT – US FOREST SERVICE, NA S&PF, FOREST HEALTH PROTECTION



EAB density and developmental stage present at time of harvest affect potential risk of firewood.



Four harvests: May, July, Sept, Nov
(n = 10 trees per harvest)



Trees loaded on deck and processed individually.
(12.7 ± 0.4 inch DBH; range 8.9-19.7 inch DBH)



All firewood from each tree assessed.
(2347 ± 35 pieces per harvest; 9391 pieces total)



60% of firewood processed immediately to assess risk if wood moved at time of harvest (n = 5641 pieces).



35% of firewood seasoned for one year, then processed to assess risk after 12 months of seasoning (n = 3286 pieces).



Preliminary Results

- Risk at harvest was lowest on material harvested in May (12.9% of total EAB density at stage that could emerge as adults) and greatest on material harvested in November (32.6% could emerge as adults).
- Processing takes its toll. Realized emergence was very low for May material (0.16 adults per m²) and greatest for November material (3.3 adults per m²).
- Realized emergence of adults was strongly correlated with density of late instars ($r = 0.69$) and, to a lesser extent, total EAB density ($r = 0.6$).

Preliminary Results

- In addition, May material lost more bark (74%) during harvest compared to other sample periods (6-18%).
- No live EAB after 12 months of seasoning. All material needed a summer for potential adult emergence.
- Seasoned firewood was not insect-free. Firewood subject to colonization by native wood-borers.
- May and July material more readily colonized by native wood-borers (9-15%) compared to Sept and Nov (1-5%).
- Further analysis in progress.



Forest Health Program Durham Field Office



USDA



The Principal Laws Relating to USDA Forest Service State and Private Forestry Programs

- The Cooperative Forestry Assistance Act of 1976, As Amended Through 2008
- Economic Incentive and Forest Development Program Authority
- Forest Products Conservation and Recovery Program Authority
- Watershed Rehabilitation and Enhancement (Watershed Assessment)
- American Commercial Lumbermark Sales Authority
- Small Watershed Forestry Assistance Authority

Pages
18-20

- (1) conduct surveys to detect and appraise insect infestations and disease conditions and man-made stresses affecting trees and establish a monitoring system throughout the forests of the United States to determine detrimental changes or improvements that occur over time, and report annually concerning such surveys and monitoring;
- (2) determine the biological, chemical, and mechanical measures necessary to prevent, retard, control, or suppress incipient, potential, threatening, or emergency insect infestations and disease conditions affecting trees;
- (3) plan, organize, direct, and perform measures the Secretary determines necessary to prevent, retard, control, or suppress incipient, potential, threatening, or emergency insect infestations and disease epidemics affecting trees;
- (4) provide technical information, advice, and related assistance on the various techniques available to maintain a healthy forest and in managing and coordinating the use of pesticides and other toxic substances applied to trees and other vegetation, and to wood products, stored wood, and wood in use;
- (5) develop applied technology and conduct pilot tests of research results prior to the full-scale application of such technology in affected forests;
- (6) promote the implementation of appropriate silvicultural or management techniques that may improve or protect the health of the forests of the United States; and
- (7) take any other actions the Secretary determines necessary to accomplish the objectives and purposes of this section.

- (1) conduct surveys to detect and appraise insect infestations and disease conditions and man-made stresses affecting trees and establish a monitoring system throughout the forests of the United States to determine detrimental changes or improvements that occur over time, and report annually concerning such surveys and monitoring;
- (2) determine the biological, chemical, and mechanical measures necessary to prevent, retard, control, or suppress incipient, potential, threatening, or emergency insect infestations and disease conditions affecting trees;
- (3) plan, organize, direct, and perform measures the Secretary determines necessary to prevent, retard, control, or suppress incipient, potential, threatening, or emergency insect infestations and disease epidemics affecting trees;
- (4) provide technical information, advice, and related assistance on the various techniques available to maintain a healthy forest and in managing and coordinating the use of pesticides and other toxic substances applied to trees and other vegetation, and to wood products, stored wood, and wood in use;
- (5) develop applied technology and conduct pilot tests of research results prior to the full-scale application of such technology in affected forests;
- (6) promote the implementation of appropriate silvicultural or management techniques that may improve or protect the health of the forests of the United States; and
- (7) take any other actions the Secretary determines necessary to accomplish the objectives and purposes of this section.

Forest Health Activities

1. Survey and Monitoring
2. Prevention, Suppression, Eradication
3. Technical Information and Advice
4. Applied Research and Methods Development
5. Forest Health Silvicultural or Management Techniques

Forest Health Activities

1. Survey and Monitoring
2. Prevention, Suppression, Eradication
3. Technical Information and Advice
4. Applied Research and Methods Development
5. Forest Health Silvicultural or Management Techniques

Cooperative and Federal Programs

Cooperative Forest Health Program

- Connecticut, Victoria Smith
Core: \$45,200; FHM: \$23,000
- Massachusetts, Ken Gooch
Core: \$40,807; FHM: \$23,000
- Maine, Dave Struble
Core: \$118,700; FHM: \$77,000
- New Hampshire, Kyle Lombard
\$55,117; FHM: \$31,000
- New York, Jerry Carlson
\$125,000; FHM: \$82,000
- Rhode Island: Paul Ricard
\$50,000; FHM: \$23,000
- Vermont: Barbara Schultz
\$49,017; FHM: \$28,000

Survey and Monitoring

Remote sensing for forest health issues

- Visual, plane or satellite sensors

Trapping surveys for general and specific forest pests

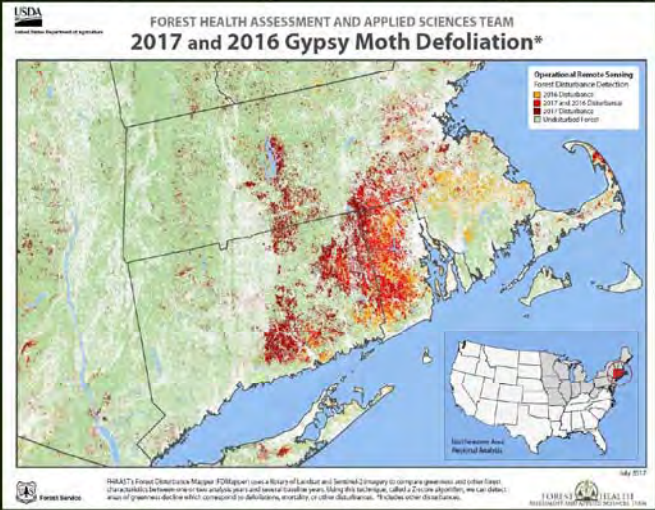
- Firewood, arboreta, southern pine beetle, forest tent caterpillar, oak wilt

Visual and plot surveys to monitor forest health conditions

- Invasive plants, deer overabundance, emerald ash borer, southern pine beetle, hemlock woolly adelgid, pine health, chaga, etc

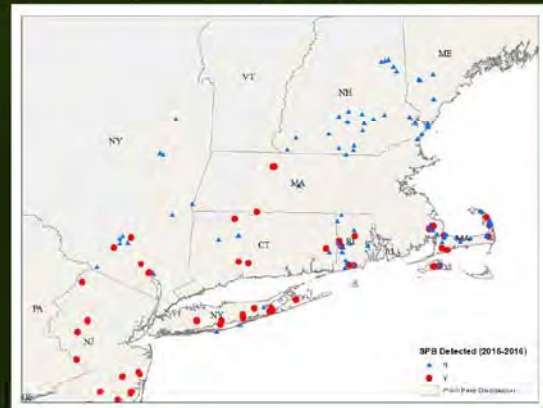


Cessna N166Z used for Forest Health remote sensing.



Ips grandicollis on a malaise trap. Photo: Marc DiGirolamo

Cooperative Southern Pine Beetle Trapping



Rhinusa asellus



Prevention, Suppression, Eradication

- Hemlock woolly adelgid suppression: Finger Lakes National Forest, Rachel Carson National Wildlife Refuge, New Boston Air Force Base, Mashantucket (Western) Pequot Tribal Nation, States
- Southern pine beetle suppression: Fire Island National Seashore, Brookhaven National Lab, Wertheim National Wildlife Refuge, New York State
- Emerald ash borer: Finger Lakes National Forest, Mohawk Nation at Akwesasne, New York and New Hampshire
- Oak wilt: New York State



Winter moth biocontrol in South Portland, Maine



Southern pine beetle suppression team, Wertheim National Wildlife Refuge, Shirley, New York.



EAB brood trees removed before adult emergence in North Andover, Massachusetts
Photo: Nate Siegert

Technical Information and Advice

Publications, Presentations, Workshops

- Evaluating insect pollinator habitat on the Green Mountain and Finger Lakes National Forest.
- Pest Alert: Oak Wilt in the Northeast
- Monitoring White-tailed Deer Impacts: The Ten-tallest Method
- Pest Conditions and Forest Health Highlights

Advisory Committees

- State Forest Pest Advisory Groups
- Federal Forest Health Committees
- State Natural Heritage/Invasive Plant Steering Committees

Land Grant University Faculty (UMaine, UVM, UNH, SUNY)

Remote sensing coordination

Pest Alert
Oak Wilt in the Northeastern United States

Oak wilt is a deadly vascular disease caused by a fungal pathogen that affects a wide variety of tree species. It is most common in the Northeastern United States, where it has caused the death of millions of trees. The disease is spread by sap-feeding beetles and is most common in the Northeastern United States, where it has caused the death of millions of trees.

Current Range
Oak wilt is currently found in the Northeastern United States, where it has caused the death of millions of trees. It is most common in the Northeastern United States, where it has caused the death of millions of trees.

Symptoms
Oak wilt is characterized by the sudden death of trees. The leaves turn yellow and drop, and the tree eventually dies. The disease is most common in the Northeastern United States, where it has caused the death of millions of trees.

2016 Forest Health MAINE highlights

Forest Resource Summary
Ownership of Maine's forest land area has remained stable since 2012. There are approximately 1.6 million forest acres in the state. According to the 2013 Forest Sector Inventory, private forest ownership makes up about 60 percent of the forest land area while public ownership, including state, federal, and local, makes up about 40 percent of the total forest land. The ownership of forest land in Maine is divided into three categories: private, public, and other.

Forest Land Ownership in Maine, 2014

Forest Sector Inventory
Maine Department of Agriculture
Maine Department of Environmental Protection
Maine Forest Service
June 2015

Applied Research and Methods Development

- High spatial resolution spectral unmixing for mapping ash species across a complex urban environment
- Optimizing use of girdled ash trees for management of low-density emerald ash borer populations
- Comparison of the species richness and abundance of Cerambycidae and Scolytinae captured in aerial malaise traps with and without a bottom collector
- Effect of climatic variables on abundance and dispersal of *Lecanosticta acicola* spores and impact of defoliation on eastern white pine.
- Threats to North American forests from southern pine beetle with warming winters

Silviculture and Management

- Southern pine beetle management in pitch pine
- The Effects of Silvicultural Treatment on *Sirex noctilio* Attacks and Tree Health in Northeastern United States
- Managing Hemlock in Northern New England Forests Threatened by Hemlock Woolly Adelgid and Elongate Hemlock Scale
- Forest Health prescriptions at Marsh-Billings-Rockefeller National Historical Park
- Acting Silviculturist for the White Mountain National Forest

USDA Forest Service State and Private Forestry

Budget

Forest Service 2017 – \$4.9 Billion

- Increase cost to manage fire impacts other FS Deputy Areas
- S&PF provides forest health info needed for decision-making activities across the Agency



USDA Forest Service State and Private Forestry

Asian Longhorned Beetle

- Funded a 2-year Evaluation Monitoring project with the University of Vermont to evaluate forest stands after eradication of ALB to predict forest stand structure and composition.
- Funded NEFPC to support APHIS surveys
- Published host guide
- Completed impacts to forests

FY 2014	FY 2015	FY 2016	FY 2017
\$50,000	\$50,000	\$45,000	\$20,000

USDA Forest Service State and Private Forestry

Emerald Ash Borer

Source	2014	2015	2016	2017
Forest Health Management	\$739,000	\$500,000	\$180,000	\$249,000
Landscape Scale Restoration	0	368,000	202,000	0
Great Lakes Restoration Initiative	1,000,000	988,000	1,267,000	1,700,000
Totals	1,739,000	1,856,000	1,649,000	1,949,000

Emerald Ash Borer

- EAB University
- Coop treatments in PA, IL, IN, MI, MN, NY, NJ, OH, WI
- Fed treatments: Valley Forge, Hopewell Furnace, Sleeping Bear Dunes, Allegany NF, etc
- 3-year Evaluation Monitoring project with MSU to evaluate the conditions of EAB invaded riparian forests
- 3-year Special Technology Development project with Forest Service research, to identify and conserve lingering ash
- Working with NASA to develop tools for early detection
- Working with tribes on ash of cultural importance

Gypsy Moth



- Provided funds to 5 states (and 1 National Forest) for suppression in the generally infested area to treat 57,000 acres in 2017
- Continue to work with APHIS and states to eradicate infestations in uninfested area; treated 6,100 acres in NC, MN, and IN in 2017

Slow the Spread

- STS continues to slow gypsy moth spread by 60% or more
- STS treated 397,461 acres in 2017
- Through the STS Foundation treated areas in 7 states, National Forests, FWS, and DOD lands

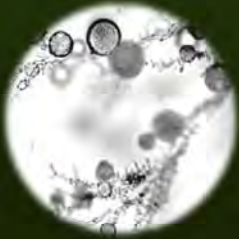


USDA Cooperative Gypsy Moth Program

Forest Health Protection - Gypsy Moth Funding (2004 – 2017)

	STS	Suppression	Eradication	Total
FY 2004	\$11,000,000	\$2,080,000	\$0	\$13,080,000
FY 2005	10,000,000	624,000	338,500	10,962,500
FY 2006	9,950,000	3,400,000	600,000	13,950,000
FY 2007	8,250,000	4,001,000	424,000	12,625,000
FY 2008	8,508,000	4,777,000	100,000	13,385,000
FY 2009	8,095,000	6,900,000	100,000	15,095,000
FY 2010	10,500,000	1,500,000	20,000	12,020,000
FY 2011	10,500,000	193,000	176,000	10,869,000
FY 2012	8,125,000	57,000	75,000	8,257,000
FY 2013	7,875,000	995,000	24,000	8,894,000
FY 2014	8,875,000	270,000	82,000	9,227,000
FY 2015	8,125,000	1,010,000	13,000	9,148,000
FY 2016	7,583,000	2,266,000	225,000	10,074,000
FY 2017	7,000,000	805,000	216,000	8,021,000

Sudden Oak Death



- *Phytophthora ramorum* Regulated Plant List Review Working Group
- Currently working with APHIS/ARS on National SOD Stream Baiting protocols and surveys
- EU1 found and is highest priority



- All lands strategy across state & federal agencies to survey, treat, and monitor
- ~6200 acres of forested land treated across all ownerships since 2015 in Oregon
- Treatment costs range from \$2500 to \$5000/acre

Thousand Cankers Disease



- Continue to work with APHIS updating TCD Survey Guidelines
- TCD Research & Management Meeting June 13-15, 2017 in Lafayette, IN
- Walnut Twig Beetle Survey: NJ, WV, MD, IA, IN, MO



- Continue to work with APHIS on evaluating the efficacy of steam/vacuum treatments
- Research, Regulatory, and Management are under review to ensure best practices are applied
- Support TCD website www.thousandcankers.com

Questions?



Katya Nikolaeva, PhD
 State Survey Coordinator,
 Pennsylvania Department of Agriculture

Available molecular tools for regulatory pest detection



Challenges for regulatory and quarantine programs:

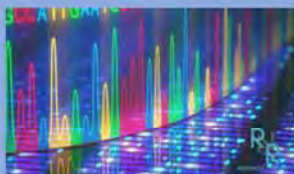
Early, sensitive and accurate pest detection is the key for successful regulatory response



- Symptomless infections (after pesticide applications)
- Low titer of pathogen (not optimal environmental conditions)
- Unusual symptoms
- Genetic variability within a target pest
- Mixed infections
- Unculturable pathogens (phytoplasmas)
- Uncharacterized pests
- Unknown pests

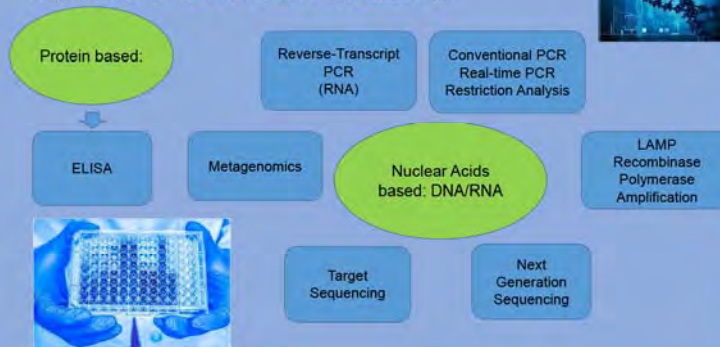
Molecular Detection Methods Advantages

- **High sensitivity**
Can detect the presence of a single cell
- **High specificity**
Can detect specific genotype
Can distinguish close related species or even related organisms
- **Fast**
Quicker than traditional culturing and bioassays
- **Adapted to instrumentation**
Less labor
Higher throughput
Less chance for human error



- **High quality**
International standards
Reproducible within lab and between labs
Highly reliable

Molecular Detection Methods



ELISA: enzyme-linked immunosorbent assay

Routine PDA samples:
 INSV - Impatiens necrotic spot virus,
 TSWV - Tomato spotted wilt virus,
 CMV - Cucumber mosaic virus,
 TMV - Tobacco mosaic virus
 POTY virus group



ELISA diagnostics at PDA

CAPS and Farm Bill surveys:
 Tospovirus Groundnut Bud Necrosis Virus
 Tomato Black Ring Virus
Ralstonia solanacearum race 3 biovar 2 (pre-screening)
P. ramorum (pre-screening in 2016)

Fruit Tree Improvement Program:
 ToRSV (tomato ring spot),
 PNRSV (prune necrotic ring spot)
 PDV (prune dwarf)
 Plum Pox virus

Potato Certification Program:
 PLRV - Potato leafroll virus,
 PVA - Potato virus A,
 PVM - Potato virus M,
 PVS - Potato virus S,
 PVX - Potato virus X,
 PVY - potato virus Y



Polymerase Chain Reaction (PCR)

Technique that allows to make millions of copies of a specific region of DNA that can be detected within short time.

CAPS and Farm Bill surveys:
Phytoplasma spp.
Meloidogyne group
 nematodes



PCR diagnostics at PDA

Routine PDA samples:
Xanthomonas gardneri
Xanthomonas euvesicatoria
Rhodococcus fascians
Xylella fastidiosa
Erwinia amylovora
Agrobacterium tumefaciens

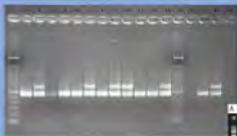
PDA Certification Programs:
 TriFoCAP (12 viruses)
 Potato viroid
Xylella fastidiosa

***P. ramorum* survey**
 PA Nursery SOD survey
 National SOD Forest Stream Survey (14 Eastern states)

PDA State Surveys:
 Apple Luteovirus 1
Xylella fastidiosa

PCR Polymerase Chain Reaction

Conventional PCR Amplified product is detected by end-point analysis – i.e. by running products on agarose gel after the reaction has finished

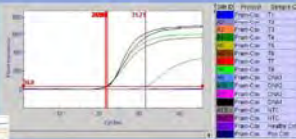


Template DNA
 Reaction Buffer
 Mg^{2+}
 Primers
 Polymerase

3-6 h



Real-time PCR allows the accumulation of the amplified product to be detected and measured as the reaction progresses, that is in "real-time"



Template DNA
 Reaction Buffer
 Mg^{2+}
 Primers + **Probe**
 Polymerase

1 h

P. ramorum detection: PCR vs ELISA vs culture

Main detection and ID method:
P. ramorum specific qPCR
 PCR Positive (2004-2017): 145
 (PA Nursery Survey and National Forest Stream Survey)

ELISA pre-screening:
Phytophthora genus level:
 False Positive and False Negative

\$5/sample
 DNA extraction

\$5.42/sample
 qPCR

False positive
 (*Pythium* spp. and other oomycetes)

False negative !!
 with some *Phytophthora* species
 (*P. nicotiana*)

Growth on PARP: 94 (*Phytophthora* spp.)
P. ramorum cultures: 20
P. ramorum – slow growing, hard to recover from mixed infections or from water samples



\$7/sample

ELISA immunostrips,
 Agdia

Quality of molecular detection

- USDA approved protocols for regulated pests
CAPS approved methods
- some protocol published on NAHLN website (NPPLAP)
 - some available upon request from Beltsville Lab
 - Some "Under review" (Asian Pear Blight, *Maulinia* spp.)
- PDA developed and validated protocols
Validated protocols for established pathogen
Protocols for newly described pathogens?

Positive Controls for targets (DNA)
Internal controls - plant markers

- Quality of equipment for detection
- PCR equipment
 - Automatic Pipetting
 - Robots
- Build capacity – be prepared (CAPS and Farm B)
- Trained diagnosticians
 - Reagents available
 - Equipment calibrated

- Beltsville Trainings:
- *P. ramorum*
 - *P. kernoviae*
 - Phytoplasma spp.
 - Plum Pox virus

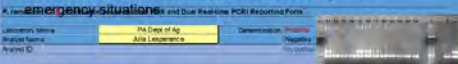
- Reagent purchase and quality:
Commercial kits:
- DNA/RNA extraction kits (Qiagen)
 - ELISA kits (Agdia, Bioreba)



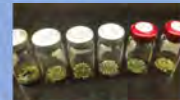
The National Plant Protection Laboratory Accreditation Program (NPPLAP)

Evaluates laboratories that use molecular diagnostics for APHIS-Plant Protection and Quarantine (PPQ)

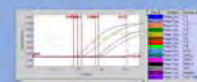
- to ensure lab capability to make accurate diagnostic determinations for regulatory purposes.
- to increase diagnostic capacity and proficiency
- to establish a state of readiness when needed by PPQ in emergency situations



Sample #	Results Interpretation			Final Determination	Analyst Comments
	ITS Real-time PCR	ELISA Real-time PCR	Conventional PCR		
15	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
16	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
17	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
18	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
19	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
20	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
21	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
22	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
23	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
24	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
25	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
26	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
27	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
28	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
29	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.
30	negative	negative	negative	Negative	Sample DNA is not from <i>Phytophthora</i> spp.



- Proficiency tests:
PDA lab participates since 2008
- NPPLAP Certifications:
- Plum Pox virus (since 2011) 1 Technician
 - *P. ramorum* (since 2006) 2 Technicians
 - Phytoplasma (since 2015) PDA – 3 Technicians



Planned deviation of PPQ detection protocols: NPPLAP-PDA Collaborative Study

Labs participate in a planned deviation study based on their demands

Regulatory network benefits from a planned deviation study



Cepheid teal-time PCR System
16 PCR wells, special tubes

Quant Studio 3 real-time PCR system
96 PCR wells, common tubes



- Harmonization balanced with lab needs
Demand for high-volume testing
New equipment
Does not need to be repeated for other labs
Experience in method development
Quality management principles facilitated as outlined in international standards

- Comparability
- Precision
 - Range
 - Limit of detection
- Verification
- Selectivity
 - Linearity
- Validation
- Accuracy
 - Robustness
- Measured Uncertainty
- Binary Classification

"Pass" for *P. ramorum* ITS and ELICITIN Planned Deviation

Sequencing techniques

Sanger Sequencing
1st generation sequencing



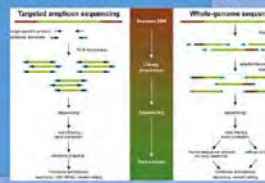
Process of determining the nucleotide order of a given DNA fragment.

Next Generation Sequencing (NGS)
High-throughput sequencing (HTS)

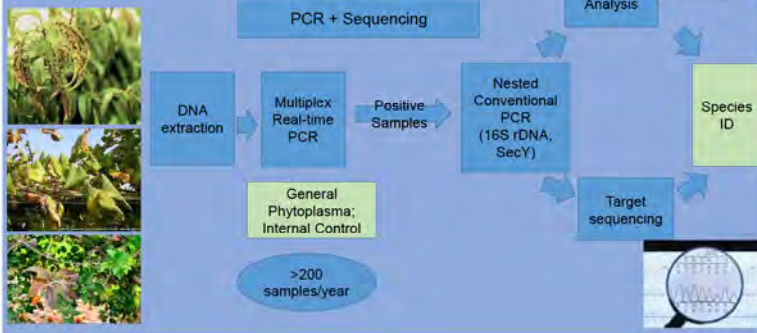
- Chain termination method
- Sequence one region at a time
- Better for sequencing a small number of regions
- Low cost
- Human genome: 13yrs, \$3B

Cost: \$6-9 per sample;
\$300 for plate (96 samples)

- Capable of sequencing millions of molecules simultaneously
- Sequence numerous genes at a time or all DNA in a sample
- Full genome sequencing or several genomes simultaneously
- Intensive data analyses
- Faster for full genomes
- Automatable
- More accurate
- Greater specificity
- Human genome: 1-2 days, <\$1K
- \$150-600/test



Phytoplasma detection and identification workflow



Phytoplasma ID by target sequencing

16S rDNA and ribosomal protein gene 100% identity to reference strain *Ca. Phytoplasma pruni* strain
secY gene had one nucleotide difference 99.92% (1252/1253) from *Ca. Phytoplasma pruni* strain

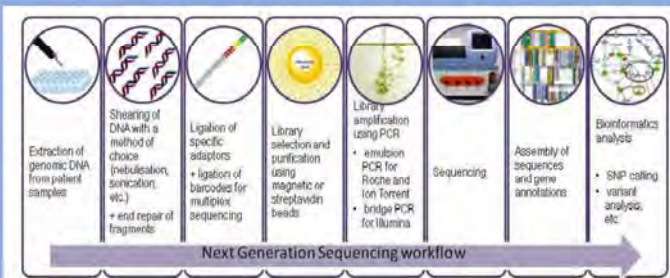
16S rDNA 97.6% similarity to *Ca. Phytoplasma fraxini* (Ash Yellows).
tuf and *SecA* genes significantly different in from typical *Ca. Phytoplasma fraxini*

X-Disease phytoplasma

Likely new phytoplasma species

Next generation sequencing (NGS)

High-throughput sequencing (HTS)



Next Generation Sequencing



Ion S5 Sequencer

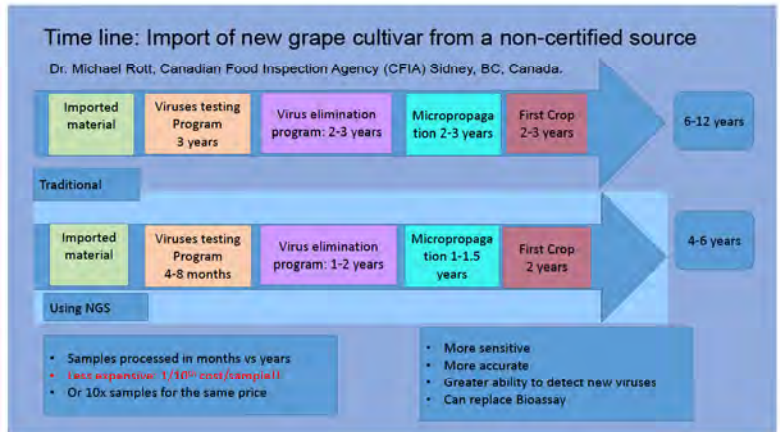
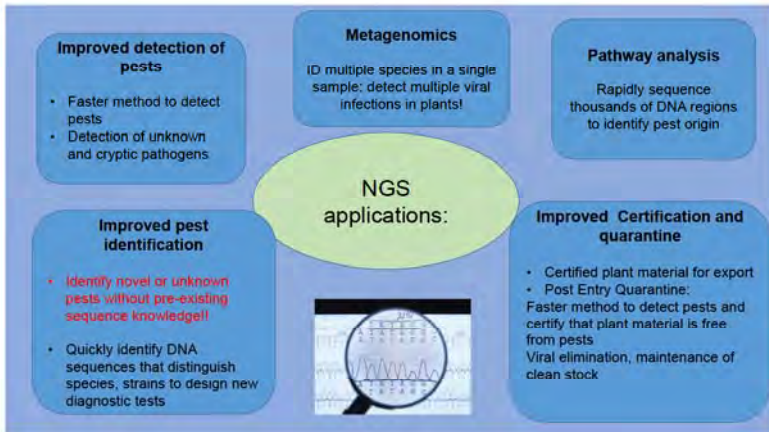


The Ion CHEF performs PCR, Enrichment, Library Preparation and CHIP loading

Less expensive equipment. Fast.



Ion Torrent chip



How NGS can be used for taking appropriate decisions for regulation purposes?

- Diagnostics for uncharacterized or unknown pathogens
 - All other tools only test for known pathogens
- Improved diagnostics in case of multiple infection
- Improve diagnostics for known pathogens (especially non-culturable)
- Streamline detection process, shorten time
- National Clean Plant Network support project to document the effectiveness of NGS as a tool for certifications in berries, grapes, tree fruit, citrus

Example: Strawberry viruses:

Major: SCV, SMOV, SMYEV, SVBV, SPaV, BPYV, SNSV, SPV-1

Minor: ApMV, ArMV, CMV, FCCV, FCILV, RspRSV, SCFaV, SLRSV, SILC

Rare: SLCV, SPMYEV, TBRV, TSV, ToRSV (Dr. Robert Martin, NCPN)

How many Plant Pests we know?

Category	Count
Recognized plant viruses:	1991 - 380 2005 - 980 2014 - 1,200 + Uncharacterized Unknown
Phytophthora	2000 - 60 species 2015 - 145 + Uncharacterized Unknown Estimate - 600
Plant pathogenic bacteria	Phytoplasma 28 groups Liberobacter + Uncharacterized Unknown

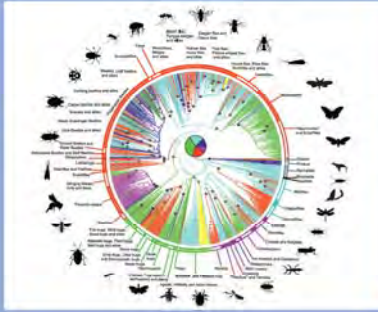
How modern techniques can complicate plant protection?

Discovery of pathogen-like sequences in germplasm without biological evidence of disease

Discovery of new pathogens without information on distribution and economic impact could have trade impacts

Lack of international standards on testing

Could be required by other countries as a condition of entry for our exports



Summary:

- New modern technologies are powerful tool for plant pest detection and identification.
- Not all organisms associated with plants are pests: some may be mutualists or commensal agents;
- Interpretation of results is the biggest challenge in regulatory and phytosanitary context;
- Significant validation data needed
- Validated, and Nationally approved and Internationally accepted protocols needed
- Policies for the interpretation of the results need to be developed to enable appropriate regulatory decisions.



Thank you!

Questions?





PLUM POX VIRUS ERADICATION PROGRAM

Eastern Plant Board, 2018

What is Plum Pox Virus (PPV)?

- ❖ Most devastating viral disease of stone fruit
 - ❖ From the genus *Prunus*
 - ❖ Also known as **Sharka** (Slavic name)
- ❖ The virus reduces fruit yields and the marketability of the fruit
- ❖ Over time, infected trees are rendered useless for fruit tree production



What is Plum Pox Virus (PPV)?

- ❖ Can infect all cultivated stone fruit species including:
 - Peach, Plum, Apricot, Nectarine, Almond, Sweet & Sour Cherry
 - Wild & Ornamental *Prunus*
- ❖ Six strains of PPV have been identified worldwide: D, M, El-Amar, C, W, & Rec,
- ❖ **ALL** North American occurrences of PPV thus far have been attributed to strain D

What is Plum Pox Virus (PPV)?

- ❖ PPV – D does not infect all *Prunus* species
- ❖ Main stone fruits of concern:
 - Apricots (*Prunus armeniaca*)
 - Common Plum (*Prunus domestica*)
 - Japanese Plum (*Prunus salicina*)
 - Peach (*Prunus persica*)
 - Nectarine (*Prunus persica* var. *nucipersica*)
- ❖ Poses **NO** Danger to Consumers

What is Plum Pox Virus (PPV)?

PPV Susceptible Species

- ❖ **Fruit Bearing**
 - ❖ American Plum & Wild Plum
 - ❖ Apricot
 - ❖ Cherry Plum / Myrobalan Plum
 - ❖ Common Plum / European Plum
 - ❖ Japanese Plum
 - ❖ Sweet Almond
 - ❖ Peach
 - ❖ Nectarine
- ❖ **Ornamental**
 - ❖ Purple Leaf Sand Cherry
 - ❖ Purple Leaf Plum
 - ❖ Purple Leaf Peach
 - ❖ Flowering Almond
 - ❖ Western Sand Cherry
 - ❖ Black Thorn & Sloe
 - ❖ Kwanzan Cherry
 - ❖ Japanese Flowering Cherry
 - ❖ Nanking Cherry & Hansen's Bush Cherry
 - ❖ Double Flowering Plum

What is Plum Pox Virus (PPV)?

PPV Origin

- ❖ **1910:** Virus first reported in Bulgaria (Infected Bulgarian Plums)
 - ❖ Spread slowly throughout Eastern Europe
- ❖ **1950's-1970's:** Spread throughout Western Europe
 - ❖ Moved into North Africa, Middle East, India, China
- ❖ **1992:** Virus detected in Chile
- ❖ **1999:** Virus detected in Pennsylvania, USA
- ❖ **2000:** Virus detected in Ontario & Nova Scotia, Canada
- ❖ **2006:** Virus detected in Michigan, USA
- ❖ **2006:** Virus detected in New York, USA



What is Plum Pox Virus (PPV)?

PPV Symptoms

- ❖ **Leaf**
 - ❖ Yellow or light green ring patterns, bands or blotches
- ❖ **Fruit & Pit**
 - ❖ Yellow or light green ring patterns, bands or blotches



What is Plum Pox Virus (PPV)?

PPV Symptom Information

- ❖ Vary with timing of infection, cultivar, species, and environment
- ❖ Often not apparent until 3 years or more after infection
- ❖ Occur sporadically
 - Uneven distribution within the tree
- ❖ Newly infected trees are rarely symptomatic
- ❖ **Symptomless trees act as a silent virus source**



What is Plum Pox Virus (PPV)?

PPV Transmission



To a New Region:

1) Propagative Material

- Grafts
- Budwood

2) Distribution of Contaminated Material

- From infected nursery stock
- From infected plant material to a new location

- ❖ Once infected, the virus is systematic and occurs in the cytoplasm of the cells in all parts of the plant

What is Plum Pox Virus (PPV)?

Why Eradicate?

- ❖ To eliminate the unmitigated spread of the Virus in the United States

Significant Economic Losses:

- ❖ Jeopardizes our 1.4 million dollar stone fruit industry
- ❖ Reduces fruit yield, fruit marketability & shortens productive lifespan of orchards
- ❖ Renders stone fruit trees useless for fruit tree production



Plum Pox Virus Survey

- ❖ Following the discovery of PPV in New York State, the U.S Secretary of Agriculture declared an emergency to effectively carry out an eradication program in the State

Plum Pox Virus Program

- ❖ New York State Department of Agriculture and Markets, Division of Plant Industry, Plum Pox Survey Eradication Program (NYSDAM)
- ❖ US Department of Agriculture, Animal Plant Health & Inspection Service, Plant Protection & Quarantine, Plum Pox Virus Survey (USDA-APHIS-PPQ-PPV)

Plum Pox Virus Survey

NYSDAM Commercial Orchard Survey



Plum Pox Virus Survey



Plum Pox Virus Survey

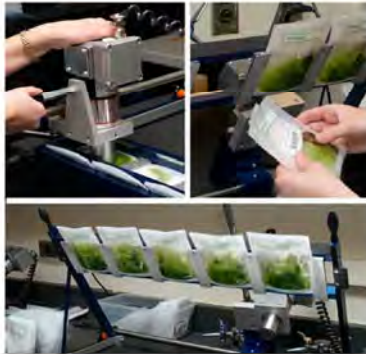
Sampling



Plum Pox Virus Survey

PPV Testing Process

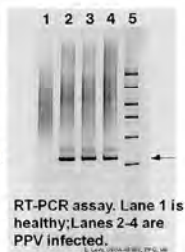
- ❖ Sample is ground with a tissue homogenizer
- ❖ Leaf extract is tested for PPV with ELISA in micotiter plates using specific antibodies



Plum Pox Virus Survey

PPV Testing Process

- ❖ **If the tissue was flagged as a suspect:**
 - ❖ Remaining tissue will be sent to the USDA Beltsville Lab for retesting and confirmation
 - ❖ The suspected tree and neighboring trees will be all be re-sampled and sent for testing
- ❖ **RT-PCR Testing**
 - ❖ Reverse Transcription Polymerase Chain Reaction
 - ❖ Make diagnosis with a low concentration of virus
 - ❖ 5000 times more sensitive than ELISA



Courtesy L. Levy. Reproduced from L. Levy, V. D. Dimsaleggi, R. Scorza, and M. Köber. Plum Pox: Potyvirus Disease of Stone Fruits, 2000. APSnet feature, <http://www.apsnet.org/onlinefeature/PlumPox/Top.html>

Plum Pox Virus Survey

PPV Testing Process

- ❖ If retested samples are **positive**:
 - ❖ Destruction orders will be issued

Virus Management:

- ❖ No chemical control available to prevent, eliminate or cure PPV
- ❖ The spread of the disease is controlled by eliminating infected trees

Plum Pox Virus Survey

PPV Management

Destruction Orders:

- ❖ All Infected trees within a 50 meter radius around the positive tree must be removed and destroyed
- ❖ Sucker shoots also need to be removed

Plum Pox Virus Survey

Destruction Photos



Plum Pox Virus Survey

Destruction Photos



Plum Pox Virus Survey

PPV Management

Once the disease becomes established

- ❖ Control and prevention measures include:
 - ❖ Elimination of infected trees in nurseries and orchards
 - ❖ Field surveys
 - ❖ Use of only certified nursery materials
 - ❖ Establishment of a Regulated Area
 - ❖ Established of a Nursery Stock Regulated Area

Plum Pox Virus Survey

Regulated Area

- ❖ 1 mile radius surrounding the location where plum pox virus has been detected

Regulated Area Protocol:

- ❖ Growers, Nurseries & Distributors:
 - ❖ **No** Planting,
 - ❖ **No** Propagation,
 - ❖ **No** sale of susceptible fruit-bearing & ornamental varieties

Regulated Area Map

PPV Restricted Area, Towns of Marlborough and Newburgh
2015-2016



Plum Pox Virus Survey

Nursery Stock Regulated Area (NSRA)

- ❖ 11.5 kilometer radius surrounding the location where plum pox virus has been detected
 - ❖ Town of Marlborough
 - ❖ Town of Plattekill
 - ❖ Town of Newburgh
 - ❖ City of Newburgh
 - ❖ Town of Fishkill
 - ❖ Town of Wappinger
 - ❖ Town of Poughkeepsie
 - ❖ City of Poughkeepsie

Plum Pox Virus Survey

Nursery Stock Regulated Area (NSRA) Protocol:

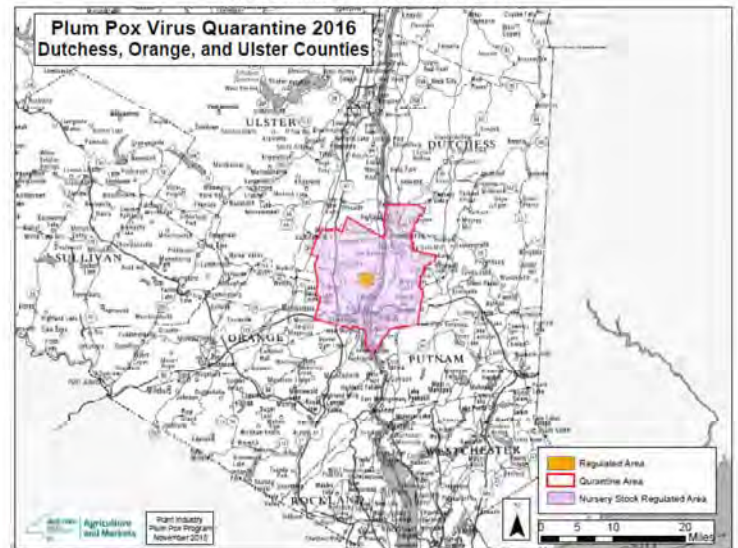
Commercial Stone Fruit Orchardist:

- ❖ YES Planting
- ❖ NO Propagation

Nursery Growers & Distributors:

- ❖ NO Planting
- ❖ NO Propagation
- ❖ NO sale of susceptible fruit-bearing & ornamental varieties **UNLESS** you have a NYS Compliance Agreement
 - ❖ With compliance agreement, can only sell within NSRA

Nursery Stock Regulated Area (NSRA) Map



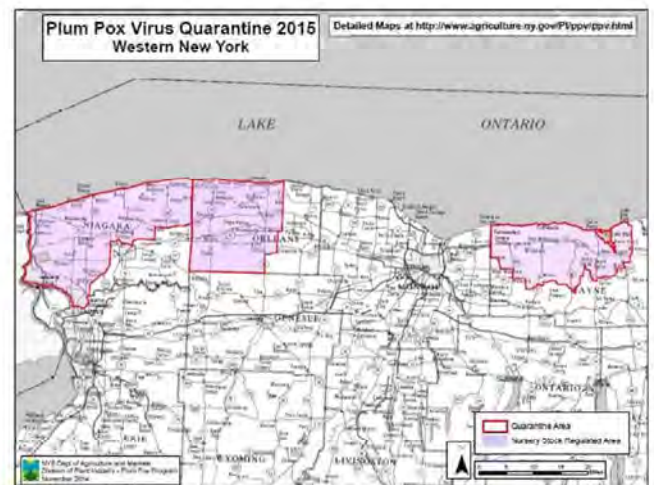
Plum Pox Virus Survey

Path to Eradication

After Positive PPV Detection:

- ❖ Beginning of Intensive Sampling
- ❖ 3 Continuous Years of Clean Survey
 - Release of Regulated Area (1 mile zone)
- ❖ 6 Continuous Years of Clean Survey
 - Release of Nursery Stock Regulated Area (11.5km zone)

Plum Pox Virus Survey



Agreements and ezFedGrants ...1 year later

Carrie Croy-Owen
PPQ FO Agreements Specialist
Raleigh, NC



...before we really get started



- Introductions
- Expectations
- Questions/Concerns

Staff and Coverage

Fort Collins Office

Paula Flather (970) 494-7567 Frank Parker (970) 494-7577

AK, AL, AS, CA, CNMI, CO, GU, HI, ID, MN, MS, MT, NV, UT, WA

Raleigh Office

Carrie Croy-Owen (919) 855-7334

CT, DE, FL, GA, IL, KY, MA, ME, NC, NH, OH, RI, SC, TN, VT, WV,
WI, Puerto Rico, US Virgin Islands

Caesar Bell (919) 855-7365

AZ, IN, KS, NE, ND, NM, OK, OR, PA, SD, TX, WY

Buck Marks (919) 855-7369

AR, IA, LA, MD, MI, MO, NJ, NY, VA

Roles and Responsibilities

- Grants Administrative Office (GAO):
 - **approve external user access requests and may maintain/manage access for users**
 - Create, update and modify applications and claims
 - Ability to sign and update financial and performance reports
 - Ability to reassign!!!
 - **MANDATORY**

Roles and Responsibilities cont.

- Grants Processor
 - Create, update and modify applications and claims
 - Ability to sign and update financial and performance reports
- Signatory Official
 - Access to objects when signature is required
 - **MANDATORY**
 - **These roles are determined by you and can only be changed by the GAO of your Organization**

Planning



Work and Financial Plan

- Developed with ADODR
- Must be signed by both ADODR and ROAR
- Signed copy must be returned to Recipient to upload in ezFedGrants during application process
- ADODR uploads plan to our SharePoint site
- Agreements Specialist reviews work plan and creates opportunity

Pre-award Request vs. Partial Agreement

- **Pre-award - Done outside of ezFedGrants**
- **Pre-award Letter sent to ADODR**
- **Up to 25% or ¼ of the Agreement**
- Must be submitted prior to the start date of the agreement
- Holds a date, does not obligate any funds
- Are automatically extended if necessary
- During a government shutdown, you cannot continue work under a pre-award

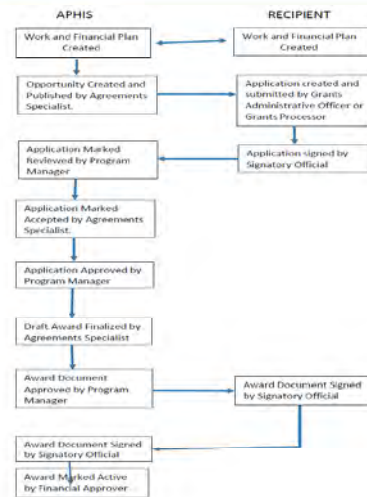
- **Partials – done through ezFedGrants**
- Executed for entire length of Agreement
- Only executed for current CR amount
- Funded and executed – can work during a government shutdown
- Revisions are done to add remaining funds once federal budget is passed

Award



Application Process

- Receive opportunity from Agreements Specialist
- Complete and submit application to ADODR
- ADODR receives and reviews completed application and submits to Agreements Specialist
- Agreements Specialist reviews application and writes agreement



List of Attached Files:

Title	File	Operator	Date/Time	Delete
IF-424E Assurance - Non-Construction Programs	C:\Users\lts@usda\Documents\IF-424E.pdf	Elizabeth Teckburg	2/26/2018 9:51 PM	
WDRM Qualification	C:\Users\lts@usda\Documents\WDRM Qualification.pdf	Elizabeth Teckburg	2/26/2018 5:32 PM	
Work Plan	C:\Users\lts@usda\Documents\Work Plan.pdf	Elizabeth Teckburg	2/26/2018 5:30 PM	
Prostate Plan	C:\Users\lts@usda\Documents\Prostate Plan.pdf	Elizabeth Teckburg	2/26/2018 5:20 PM	

Work Plan
 Prostate Plan
 IF-424E Assurance - Non-Construction Programs
 WDRM Qualification
 Work Plan
 Prostate Plan
 Certification Regarding Lobbying

Editing Items

The screenshot shows a dashboard with the following statistics:

- 32 Total Items
- 18 Available Items
- 1 Applications under Review
- 0 Approvals under Review
- 0 Claims under Review

Below the statistics is a 'News and Notes' section with a table of updates:

Title	Date Updated
IF-424E Assurance - Non-Construction Programs	2/26/2018 11:50 AM
WDRM Qualification	2/26/2018 11:42 AM
Work Plan	2/26/2018 11:32 AM
Prostate Plan	2/26/2018 11:20 AM

At the bottom, there is a 'My Agreements' section.

- Only 1 person can edit the document at a time
- Once an application has been created, **it can only be edited by the originator or the GAO**
 - Once the GAO “grabs” the application, they must finish the application
- Once the application has been submitted to the Signatory, the only way to edit it is to return it.
 - This sends it back to the originator
- If the application is sent back by Awarding Agency, it also goes back to the originator

Claims

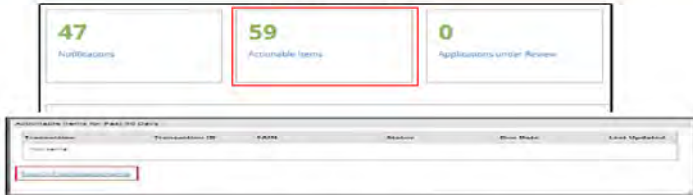
The screenshot shows a table with the following data:

Total Federal Award Amount	Actions
\$5,250.00	I want to
\$38,500.00	I want to

Red boxes highlight the 'Actions' column and a dropdown menu. A callout box points to a 'My Agreements' section at the bottom of the page.

- Can be submitted by the Grants Processor or the GAO
 - Can be submitted at anytime
- *****Will not process if reports are late*****

Reporting



- Only GAO's and Administrative Contacts receive report notification
 - **This is where the Partners Tab is extremely important
 - GAO can reassign reports to anyone who has ezFedGrants access

Reporting

- On a true schedule
 - Depending on the report schedule selected (quarterly, semi-annual or annual) the reports generate using the start of the agreement
 - Ex: Agreement starts April 15 and has a semi-annual reporting schedule – the first report is due Nov. 15.
- Cannot submit reports before generated in system

Revisions

- -Initiated by Agreements Specialist and ADODR outside of ezFedGrants
 - Will need to include new 424/424A for additional funding **only**
 - Agreement will route through ezFedGrants for signatures

Benefits

- Eliminates paper
- One central place to find Agreements
- Quicker execution of Agreements
- Faster processing of claims
- Same process for All APHIS and USDA agreements

HELP



- 1) SPHD Office
- 2) Agreement Specialist
- 3) ezFedGrants@cfo.usda.gov
- 4) ezFedGrants.helpdesk@aphis.usda.gov

Training

USDA United States Department of Agriculture
Financial Shared Services

Home Services **APR 01**

ezFedGrants / Training
Access and User Roles

This document provides information on giving access to the ezFedGrants External Portal, understanding the various user roles, and updating your ezFedGrants External Portal user profile.

Client Services Training I Want to...

https://nfc.usda.gov/FSS/Training/Online/ezFedGrants/access_user_roles.php

Questions & Discussion





Emerald Ash Borer Detection in Delaware

*A pathway, a dead insect, a confirmation
of sample & a report*

Faith B. Kuehn



DDA Has Been Looking for 14 Years

Visual Surveys

- 2006-2017, 0 EAB



January 4, 2016

CAPS Program Trapping

- 2011 - 223 Purple Prism, 0 EAB
- 2012 - 36 Purple Prism, 0 EAB
- 2013 - 54 Purple Prism, 0 EAB
- 2014 - 62 Purple Prism, 0 EAB
- 2015 - 54 Purple Prism, 9 Green Funnel, 0 EAB
- 2016 - 12 Purple Prism, 10 Green Funnel, 0 EAB
- 2017 - 42 Purple Prism & Green, 0 EAB



2016 – enter Delta-21



109 Purple Prism Traps



National Plant Board Meeting Wilmington, DE 7/31-8/4/2016

Monday, August 1 email:

Begin forwarded message:

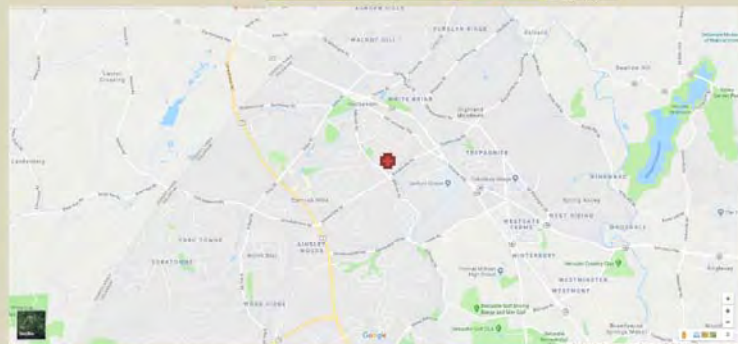
From: "Tracey Steller" <Tracey.Steller@delta-21.com>

To: "Colarusso, Thomas W - APHIS" <Thomas.W.Colarusso@aphis.usda.gov>

Subject: EAB suspect finds in DE - New Castle County

Hi Tom:

Delta-21 has collected EAB suspect from one trap in New Castle County during the midseason service as part of the National Survey. The trap number and location are shown below. According to the Forestry Technician the ash tree "was incredibly unhealthy with obvious rot at the bottom and it was pockmarked with holes".



Follow up, August 2016

- DDA, Delaware Forest Service, Dr. Jian Dian (Lead Scientist, USDA-ARS Biological Control of EAB) visited site. Examined ash trees – no EAB detections, serpentine galleries, or signs
- DELDOT and Delaware Forest Service harvested tree, cut in pieces & chipped - no EAB detections or signs
- 2017 EAB traps in delimiting area, 0 EAB



For Consideration

- Delaware SPRO, SSC and SPHD never saw the actual EAB specimen, only 391
- SPRO was informed that DE would be quarantined immediately, per USDA protocol
- Since 2016, no other EAB life forms detected, except the 1 dead adult reported by Delta 21. No signs of EAB activity detected.

Strategic Alliance

April 2018

Importance of the PPQ-NPB Partnership

- ▶ Without the partnership between PPQ and the National Plant Board (NPB), we could not effectively protect plant health across the United States.
- ▶ Each contributes deep expertise and fiscal, physical, and human resources to fulfill our shared mission: safeguarding American agriculture and facilitating safe trade.

What is the Strategic Alliance?

- ▶ In 2014, the PPQ Management Team and NPB Board of Directors established the Strategic Alliance to strengthen the PPQ-NPB partnership and identify challenges that could be addressed together to enhance safeguarding.
- ▶ In their first year, Alliance members identified four fundamental issues with the potential to do just that: 1) Continuity of funding through the Federal and State fiscal years, 2) Compliance and enforcement efforts, 3) Pest program evaluation, and 4) Training of State personnel who support PPQ programs.
- ▶ In 2016, the Alliance added two new topics to its issues-resolution portfolio: communication and data collection and use.

Status of Strategic Alliance Initiatives

- ▶ **Funding**—Created guidance and documents to help SPHDs and SPROs to plan for continued funding of programs in the face of differing fiscal years. These documents are updated each year by PPQ and posted on the NPB website.
- ▶ **Compliance and Enforcement**—Developed the compliance strategies matrix, outreach planning template, and guidance for the use of both, which have been posted on the NPB website.
- ▶ **Pest Program Evaluation**—Resulted in establishment of the Regulated Domestic Pest Program Evaluation Committee, which looks at 2-3 programs each year to assess whether they should be continued, modified, or ended.
- ▶ **Training of State Personnel**—This group has identified training needs based on an assessment conducted with the States. The group continues to discuss opportunities to fund such training.

Current Initiatives—Data Collection and Use

- ▶ Have worked to identify data collection tools that can be effectively used by Federal and State personnel and will help ensure that PPQ can access and seamlessly transfer cooperator data. Will support more effective decisionmaking and allocation of resources in PPQ.
- ▶ Will help States better understand how PPQ's approved mobile data collection applications could better support pest survey.
- ▶ PPQ and NPB representatives created a draft list of strategic actions to help move this initiative forward.

Interagency Relations Committee

Championed by Paula Henstridge and Geir Friisoe

NPB

Ann Gibbs
Collin Wamsley
John Caravetta
Larry Nichols
Aurelio Posadas

PPQ

Matt Rhoads
Scott Pfister
Heather Curlett
Wendy Beltz
Diana Hoffman
Charla Hollingsworth
Matt Travis
Diana Hoffman

PDC

Melissa Thornton
Christina Lohs
Lora Katz

Interagency Relations Committee

- ▶ Purpose: Create a culture of communications
- ▶ Process:
 - ▶ Developed case studies covering an array of scenarios like Farm Bill, wood furniture imports, and TCD.
 - ▶ Followed up with focus groups to obtain more detail on furniture and TCD.
 - ▶ Evaluated data from case studies and focus groups to identify problems, solutions, and strategies.
 - ▶ Strategies categorized and action plans developed around categories

Action Plans

- ▶ Roles and responsibilities (Leads: Steve Crook and Larry Nichols)
 - ▶ Contact lists; Federal-State responses; facilitate early dialog within the NPB
- ▶ Protocols and Processes (Leads: Paula Henstridge and Ann Gibbs)
 - ▶ Socialize existing protocols
- ▶ Orientation and training (Leads: Katie Hough, Craig Montgomery, and Joe Collins)
 - ▶ Onboarding in PPQ and NPB; meeting ongoing training and mentoring needs Protocols
- ▶ Consultation and engagement (Leads: Mary Palm, Valerie DeFeo, and Dana Rhodes)
 - ▶ Emerging pest situations; pests not of Federal economic significance
- ▶ Collaborative outreach (Leads: Heather Curlett and John Caravetta)
 - ▶ Educating NGOs, Extension and academia about the impact of their actions on regulatory actions

Status of Implementation

- ▶ Early accomplishments include:
 - ▶ Developing a decision workflow that can be used to build protocols for consultation and engagement.
 - ▶ Updated and posted communication protocols and guidance on PPQ and You and the NPB website.
 - ▶ Assessed training needs in PPQ and NPB, particularly for orientation of new SPHDs and SPROs.
 - ▶ Identified existing directories and contact lists that will be used to help communicate roles and responsibilities.
 - ▶ Identified target audiences for a collaborative outreach effort.



Horticultural Inspection Society Eastern Chapter



Report of the 44th Annual Meeting
April 9-12th, 2018
Mystic, Connecticut

Horticultural Inspection Society Eastern Chapter 2018 Annual Meeting

14 Inspectors Present From 9 of the 12 Member States

- * Connecticut
- * Delaware
- * Maine
- * Maryland
- * New Hampshire
- * New Jersey
- * New York
- * Pennsylvania
- * West Virginia

Honorary Member: Pete Trenchard

Mosquito and Tick-borne Diseases of Connecticut

John Shepard, The CT Agricultural Experiment Station



"Don't spill the stinky hay-yeast Lactalbumin infusion in your car!"

- Discussed mosquito trapping methods
- Disease testing techniques
- Distribution of the infected mosquito pools in CT
- Tick biology and disease testing
- Tick and mosquito repellent recommendations for inspectors

SANC Update and Discussion

Aurelio Posadas and Morgan Dube, NH

Topics

- Implementation of official SANC program rollout 2021
- SANC Committees → Governing Board
- Website Updates
 - Outreach materials available
 - FAQ's for inspectors
 - Posting photos on website
- Phase 2 moving along more quickly
- Meshing SANC and GCP

2018 Funding and Future

- NPB Awarding HIS Chapter \$5000
- Interstate Inspection Plans
 - Pennsylvania SLF Quarantine Area
- Possible meeting of all HIS chapters in 2020



EHIS Interstate Inspection Training Workshop

College Park, MD October 24-26th, 2017

Attended by 21 HIS members representing 10 states

Thank you for hosting Maryland!!



2017 EHIS Interstate Inspection Training Workshop Highlights

- SANC Program Update (Dana Rhodes PDA; NPB SANC Chair)
- Boxwood Blight Compliance Panel- Discussion of how states are dealing with export to PA under Compliance. (Industry Rep Jerry Faulring of Waverly Farms – MD Nursery Grower, State Reps from NJ, PA and MD Departments of Agriculture)
- Understanding Audit Training Update (Deb Hayes and Jaime Tsambikos MDA)
- SANC Audit Discussion- (Morgan Dube NHDAMF)
 - Paperwork used for Audits
 - Addressing non-conformance- identifying what went wrong and solutions found
 - Corrective Action Requests
 - Paperwork needed to get back into compliance/certification

2017 EHIS Interstate Inspection Training Workshop Highlights



- Tour of Special Collections at the National Agricultural Library, Beltsville, MD
- Tour of the USDA/APHIS Plant Germplasm and Quarantine Facility, Beltsville Agricultural Research Center
- Tour of USDA National Arboretum South Farm (Nursery and plant breeding facility, Dr. Richard Olsen, Director of National Arboretum)
- Tour of US National Arboretum Washington, DC

Joint Sessions with EPB

-  Spotted Lanternfly, Current Status and Next Steps
-  Pathogen Speed Round- SOD, Oak Wilt, CWR, Dickeya
-  SANC/GCP Updates: Taking BMP's and verification systems to the next level
-  Hot Topics: Pollinator Issues
-  Hemp Sampler: Hemp products being prepared for market

Pest Diagnostic Jeopardy

Created by Sarah Scally, ME

- Challenged inspectors' identification skills based on information the public might provide.
- Round 1 - Jeopardy
- Round 2 - Pyramid
- Round 3 - Name that Pest



An Update from
University of
Connecticut
Extension Service
Donna Ellis and Vickie Wallace

Turfgrass Research on varieties that are:

- Drought resistant
 - Low pesticide/low risk pesticide
 - Safe for children
 - Tolerates high foot/sports traffic
 - Low fertilizer use
- IPM For Nurseries
 - Custom plans for nurseries
 - Pest specific



Nursery Field Trip Prides Corner Farm

EHIS Officers for 2018-2019 No Changes

President	Carole Neil	Maine
Vice President	Morgan Dube	New Hampshire
Secretary	Deborah Hayes	Maryland
Treasurer	Lian Colon	Delaware
Past President	Mark Taylor	Maryland
Archivist	Tia Blevins	Connecticut
Newsletter Editor	Morgan Dube	New Hampshire

HORTICULTURAL INSPECTION SOCIETY AWARD NOMINATIONS

Carl E. Carlson
Distinguished Achievement
Award in Regulatory Plant
Protection

Robert Trumbule, Maryland



HORTICULTURAL INSPECTION SOCIETY AWARD NOMINATIONS

Eastern HIS
Distinguished Service
Award

Sarah Scally, Maine



(1) RESOLUTION ADOPTED BY THE HORTICULTURAL INSPECTION SOCIETY,
EASTERN CHAPTER, APRIL 12, 2018, Mystic, Connecticut

WHEREAS the Eastern Chapter of the Horticultural Inspection Society has had the opportunity to participate in field-oriented training with the purpose of harmonizing inspection protocols,

WHEREAS the Eastern Chapter of the Horticultural Inspection Society recognizes the facilitative value of audit-based nursery certification,

WHEREAS the National Plant Board has provided funds for the Eastern Chapter of the Horticultural Inspection Society to attend field training that improves member states plant regulatory efforts,

WE RESOLVE THAT:

The Eastern Plant Board communicate to the National Plant Board the value of our positive experiences and encourage their continued support for these beneficial activities



(2) RESOLUTION ADOPTED BY THE HORTICULTURAL INSPECTION SOCIETY,
EASTERN CHAPTER, APRIL 12, 2018, Mystic, Connecticut

WHEREAS the Eastern Chapter of the Horticultural Inspection Society was established to promote education, cooperation and interaction among state horticultural inspection personnel,

WHEREAS the Eastern Chapter of the Horticultural Inspection Society values and appreciates the participation of inspectors from member states during the annual meeting,

WHEREAS the Eastern Plant Board has supported the attendance of state personnel,

WE RESOLVE THAT:

The Eastern Chapter of the Horticultural Inspection Society at its 44th Annual Meeting recognizes the Eastern Plant Board for their continued support as well as the state of Connecticut for hosting this meeting.



(3) RESOLUTION ADOPTED BY THE HORTICULTURAL INSPECTION SOCIETY,
EASTERN CHAPTER, APRIL 12, 2018, Mystic, Connecticut

WHEREAS the Eastern Chapter of the Horticultural Inspection Society members work cooperatively with United States Department of Agriculture, Animal Plant Health Inspection Service, Plant Protection and Quarantine, seeking guidance on export certification issues,

WHEREAS this is increasingly difficult with fewer Export Certification Specialists and other necessary United States Department of Agriculture personnel,

WE RESOLVE THAT:

The Eastern Plant Board work with Plant Protection and Quarantine to ensure that changes to personnel and areas of responsibility are communicated to member states' Authorized Certification Officials.



(4) RESOLUTION ADOPTED BY THE HORTICULTURAL INSPECTION SOCIETY,
EASTERN CHAPTER, APRIL 12, 2018, Mystic, Connecticut

WHEREAS chrysanthemum white rust, *Puccinia horiana*, has been detected in *Chrysanthemum* sources supplying the eastern region for many years,

WHEREAS it appears that *Puccinia horiana* is a pest of quality rather than quarantine significance,

WE RESOLVE THAT:

The Eastern Plant Board and the United States Department of Agriculture take immediate action to remove chrysanthemum white rust from "Pest of Quarantine Significance" status.



(5) RESOLUTION ADOPTED BY THE HORTICULTURAL INSPECTION SOCIETY,
EASTERN CHAPTER, APRIL 12, 2018, Mystic, Connecticut

WHEREAS the Horticultural Inspection Society, Eastern Chapter recognizes the value of dedicated inspectors,

WHEREAS the Horticultural Inspection Society realizes the value of horticultural knowledge accumulated from long term service and willingness to freely share expertise with other inspectors,

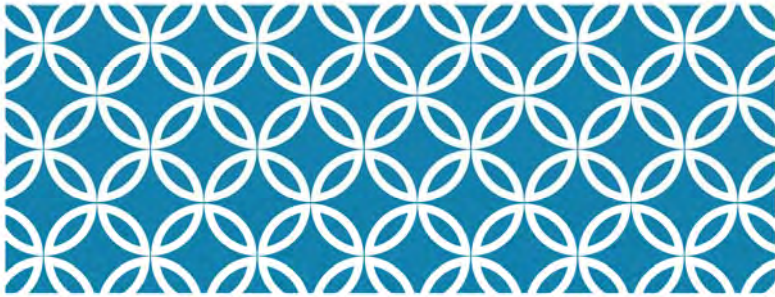
WE RESOLVE THAT:

The Eastern Plant Board join the Horticultural Inspection Society in recognizing Robert Trumbule, upon his upcoming retirement from the State of Maryland. For 32 years, Bob has exemplified professional dedication to safeguarding plant resources, provided guidance and regulatory services to both the agricultural industry and the public, and upheld the ideals of the Horticultural Inspection Society.



Thank you from EHIS





CAPS REPORT

Thursday, April 12th, 2018
Mystic, Connecticut

CAPS DISCUSSIONS

State Survey Reports

- Survey goals and highlights from 2017
- 10/12 States Reported
- 1 Current Vacancy

Discussed Survey Plans for 2018

Spotted Lanternfly

CAPS AND FARM BILL PROGRAM UPDATES

John Bowers

- Status of FY18 Guidelines

John Crowe

- Survey Supplies

Feridoon Mehdizadegan

- How to create a good Farm Bill suggestion
- Issues regarding delay in spending plan announcement – NPB support appreciated!

Cindy Music

- NAPIS update + training

OPERATIONAL SUPPORT DISCUSSION

USFS Durham Office Update – Mike Bohne

- Aerial Survey, Emergence Trapping, Cerciis, bark beetles

OTIS Lab + SLF Research – Miriam Cooperband

- Trap/Lure development, biology, behavior, host preference, dispersal

Identification Services @ Cornell – Jason Dombroskie

- Cornell insect collection + diagnostic lab, microlep ID training

SLF Field Data Form Collection Demonstration – Leo Donovall

- Using ArcGIS online environment

NEW FACES

Mike Dorgan, NY
Joanne Klein, MA

FOND FAREWELLS

Liz Lopes-Duguay, RI
Paul Cappy, NY
Sarah Grubin, MA

THANK YOU!!

Hilton Mystic, Mystic Aquarium
Vicki Smith, and the CAES
Eastern Plant Board
USDA
The Weather, for Not Snowing

