

Regional Highlights from the Northeast Plant Diagnostic Network (NEPDN).



Karen L. Snover-Clift,  George Hudler, and  Karen Scott,

Cornell University, Department of Plant Pathology and Plant-Microbe Biology, Ithaca, NY



Abstract

Established in 2002, the NEPDN focuses on diagnostician training and education through facilitating significant pathogen workshops and distributing published materials such as pest alerts and standard operating procedures. Our members present material on plant pathogens and pests to a wide variety of audiences that may, in-turn, pass the information onto others, and those to others, causing a cascading effect of information distribution. The NEPDN is committed to readiness preparation and ensures our readiness by conducting exercises with our member states. We have trained first detectors and keep them engaged by offered advance first detector trainings and by providing on-line resources. We are committed to maintaining an interactive website that contains an abundance of information for use by NPDN members, first detectors and the public. Each and every state within our region has made significant contributions to the network and their own state's plant health. Highlights of significant events will be provided on this poster to illustrate just how important the NEPDN project is to the health and well being of the plant industry in the Northeast region.

Diagnostician Training, Workshops and Field Trips

Recent regional meetings moved around our region to include a trip to Chadds Ford, PA and to New Brunswick, NJ. While in PA, we were able to spend time touring Longwood Gardens and Phillips Mushroom Farm. While in NJ, we toured the Rutgers Diagnostic Clinic and went on a field trip to see a fumigation facility and the APHIS Plant Inspection Station at Port Elizabeth.



In November of 2007, the regional center staff conduct DNA extraction training with our members. A Powerpoint presentation introduced the topic, a video covered the process, and a manual provided all the specific information needed to set-up a laboratory to perform DNA extractions. Prior to the training, essential equipment was delivered to each participating laboratory.

Since 2003, members of the NEPDN have participated in training provided by the USDA-APHIS-PPQ-CPHST National Germplasm and Biotechnology Laboratory staff. Training sessions have focused on morphological and molecular identification of the pathogens that cause Soybean Rust, *Phytophthora ramorum*, *Ralstonia solanacearum* R3 B2, the pathogens that cause Citrus Greening, the Potato Cyst nematode, Plum Pox Virus, *Phytophthora kernoviae*, and *Synchytrium endobioticum*.



Regional Accomplishments

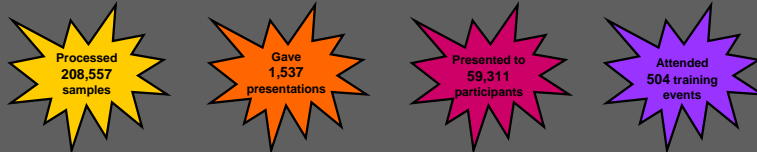


Table 1. NEPDN Regional Summary- 2002-2009

State:	2002-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	Totals:
Number of Presentations/Publications:	122	117	106	155	256	781	1,537
Number of Participants:	7,184	6,034	6,290	8,525	13,557	17,721	59,311
Number of First Detector Presentations/Publications:	0	23	18	30	21	45	137
Number of FD Participants:	0	1,104	584	728	526	1,198	4,140
Professional Development Conferences Attended:	67	71	65	87	113	101	504
Number of Other Activities:	102	182	181	227	221	296	1,209
Number of Samples Processed:	42,831	28,070	25,997	82,573	13,225	15,861	208,557

Since the creation of the NPDN in 2002, the NEPDN membership has strived to convey awareness of the network and our mission, developed training for first detectors and diagnosticians, and tested our abilities in simulated emergencies. Table 1, displays the numbers of presentations, participants, training events, NPDN activities and samples over our first seven years of operation.

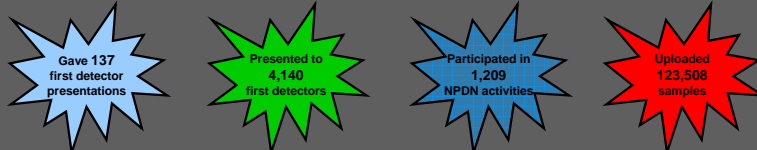
Table 2. NEPDN National Repository Sample Record Summary

Date of Search: 11/24/09 at 12:58 PM EST
Sample Dates: 2002-2009

Diagnostic Lab:	2002-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	Totals:
Confirmed	164	566	1,996	3,963	4,576	7,011	18,276
Suspected	2	469	1,409	3,387	2,700	3,260	11,227
Inconclusive	30	670	1,960	1,328	492	473	4,953
Not Detected	26	4,134	17,296	65,162	1,180	1,264	89,052
Report Total	222	5,839	22,661	73,830	8,948	12,008	123,508

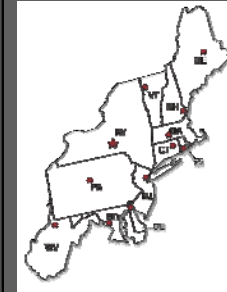
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After learning the new NPDN and PDIS system, NEPDN members began uploading sample information to the NPDN National Repository at Purdue University. These numbers are lower than actual sample numbers processed in the laboratories because the membership began by focusing on those significant, confirmed organisms.



Our Region

The NEPDN is comprised of specialists in 12 Northeastern states. Most states are represented by plant pathologists at land grant universities, but the NEPDN also works closely with specialists in allied disciplines and with other state and federal agencies. Fifteen laboratories within our 12 states actively submit data to the NEPDN National Repository, Cornell University serves as the hub of the NEPDN, providing training, guidance, and sampled diagnosis for the region, as well as back-up for the 4 other NPDN regional centers. The NEPDN regional center also serves as the leader for diagnostics within the Network and provides direction when coordinating workshops with our USDA collaborators and when producing standard operating procedures. The temperate climate in the northeast region allows for a wide variety of agricultural crops to be grown in the region. The Northeast has the dubious distinction as the entry point to the United States for historically significant pathogens that caused White Pine Blister Rust, Chestnut Blight, Beech Bark Disease, and Dutch Elm Disease, and pests such as the Asian Longhorned Beetle, Hemlock Wholly Adelgid, Golden Nematode, Gypsy Moth and Sirex Woodwasp. Economically-important crops grown primarily in the Northeast include fruits and vegetables, corn, soybean, alfalfa, ornamentals, and Christmas trees.



National Newsletter

The first NPDN newsletter was published in April 2006 and has successfully achieved our goal of providing a central source of information for all NPDN members. This resource publishes new finds, network updates, and subcommittee and regional reports.



Our Members

- Joan Allen, University of Connecticut
- Sharon Douglas, Connecticut Ag. Experiment Station
- Nancy Gregory, University of Delaware
- Karen Rane & David Clement, University of Maryland
- Bruce Watt, University of Maine
- Rob Wick & Bess Dicklow, University of Massachusetts
- Cheryl Smith, University of New Hampshire
- Rich Buckley & Sabrina Tirpak, Rutgers University
- Sara May, Pennsylvania State University
- Heather Faubert, University of Rhode Island
- Ann Hazelrigg, University of Vermont
- John Barilecki, University of West Virginia
- George Hudler, Karen Snover-Clift, Karen Scott, Carolyn Klass, Margery Daughtrey & Meg McGrath, Cornell University