

The Northeast Plant Diagnostic Network

Partnering for Plant Protection

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Abstract

The temperate climate in the Northeast allows for a wide variety of crops to be grown here. Our apples, wine grapes, and fresh market vegetables provide food and drink for much of our region, and our field crops feed cows for a thriving dairy industry. We also produce most of the U.S. maple syrup crop and host a robust Christmas tree industry. The Northeast has the dubious distinction of being the entry point to the U.S. for several devastating plant pathogens including the golden nematode, white pine blister rust and chestnut blight and insect pests like Asian longhorned beetle, hemlock woolly adelgid, and gypsy moth. International traffic through three major ports requires constant vigilance by skilled specialists on site and throughout the region.



Organizational Structure and Regional Contacts

The Northeast Plant Diagnostic Network (NEPDN) is comprised of specialists in the 12 state northeastern region of the United States. Most states are represented by plant pathologists at their respective land grant universities, but the NEPDN also works closely with specialists in all disciplines including entomology and weed science and with other state and federal agencies. The Regional Center is at Cornell University where staff coordinate training in diagnostic techniques and communications; conduct annual exercises to assure that members follow a prescribed protocol when a suspect select agent is found; and collaborate with partners in other regions to develop modules for training "first-detectors."



NEPDN Regional Meeting- Field trip to SPDN Regional Center. Photo courtesy of NEPDN Regional Center

Membership Listing

Connecticut

Rob Durgy, University of CT
Sharon Douglas, CT
Agricultural Experiment Station

Delaware

Robert Mulrooney, University of DE
Nancy Gregory, University of DE

Maine

Bruce Watt, University of ME
Clay Kirby, University of ME

Maryland

David Clement, University of MD
Sandra Sardenelli, University of MD

Massachusetts

Robert Wick, University of MA
Bess Dicklow, University of MA

New Hampshire

Cheryl Smith, University of NH

New Jersey

Richard Buckley, Rutgers University
Sabrina Tirpak, Rutgers University

New York

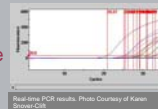
George Hudler, NEPDN Director,
Cornell University
Karen Snover-Clift, NEPDN Assoc. Director,
Cornell University
Mary McKellar, NEPDN Edu. Coordinator,
Cornell University
Karen Scott, NEPDN IT, Cornell University
Carolyn Klass, Entomology, Cornell
University
Margery Daughtrey, Cornell University, L.I.
Horticultural Research and Extension Center
Chris Smart, NYS Agricultural Exp. Station
Pennsylvania
John Peplinski, PA State University
Rhode Island
Heather Faubert, University of RI
Vermont
Ann Hazelrigg, University of VT
West Virginia
John Baniecki, WV University

Regional Center

Cornell University serves as the hub of the NEPDN, providing training, guidance, and sample diagnosis for the region, as well as back-up for the four other NPDN Regional Centers. Regional staff have participated in numerous USDA sponsored workshops to learn new diagnostic techniques and protocols to identify highly significant pathogens. Three Regional Center staff members passed requirements to become provisionally certified to conduct *Phytophthora ramorum* testing at the Cornell laboratory. This certification benefits the entire Network inasmuch as there are now 10 laboratories that are approved to process these samples. It also relieves pressure on the USDA, confirmatory laboratory in Beltsville, Maryland.



Desktop Sharpshooter used for real-time PCR testing. Photo Courtesy of Karen Snover-Clift



Real-time PCR results. Photo Courtesy of Karen Snover-Clift

Education and Training

Efforts in the Northeast have resulted in heightened awareness of the introduction of exotics along the U.S. Northern border. To date, over 800 first detectors have been trained in the Northeast including at least one first detector in 18 of the 21 counties along the Northern U.S. border. All 12 states in the region have participated in at least one and in some cases two- NPDN scenario exercises. Additionally, the NEPDN partnered with APHIS-PPQ and the New Jersey Department of Agriculture in July 2006 to conduct a full scale exercise on *Sirex* woodwasp. Combining exercise activities among the organizations listed above assisted in maximizing the efficient use of resources.



NACAA First Detector training in Buffalo NY. Photo Courtesy of Mary McKellar

Network Leadership

Diagnostics: The unique contribution of the Northeast Region staff to the broader mission of the NPDN is to collaborate with industry and governmental agencies to test and publish protocols for detecting selected, high risk pathogens and to identify training opportunities for diagnosticians in the Network.

National Database: This subcommittee creates guidelines and reviews documents to instruct NPDN users how to properly use the National Repository system. They also review existing data fields to determine whether they meet the current needs of users.

Information Technology: IT specialists and Diagnosticians have participated in meetings focused on the National Repository data collection, which now contains 46,277 NEPDN records. Since designing the network's regional and national websites in 2004, they have received 258,325 hits. Also, numerous PDIS training sessions have been conducted.

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.

