

Northeast Plant Diagnostic Network (NEPDN) and
the Cornell University Plant Disease Diagnostic Clinic

Program Leader:

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Program Objectives:

NEPDN: Create and maintain a cohesive network of land-grant university plant pest and pathogen laboratories capable of quickly detecting high consequence biological pests and pathogens that have been deliberately or accidentally introduced into our agricultural and natural ecosystems.

Plant Disease Diagnostic Clinic: Maintain a plant pathogen diagnostic clinic in the department to provide diagnostic services for New York State and Extension Educators, growers, homeowners, Master Gardeners, turf specialists, other green industry members and students.

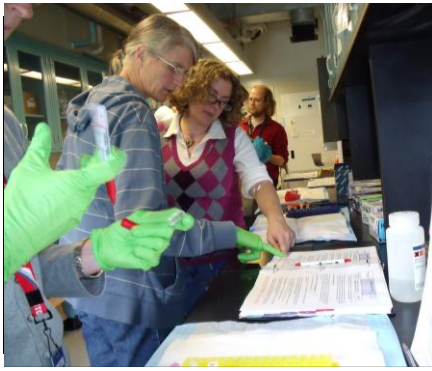


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Program Summary:

NEPDN: Cornell University serves as the Northeast regional center for the National Plant Diagnostic Network (NPDN). The NEPDN is comprised of plant diagnostic laboratories in 12 states. As the regional center, NEPDN personnel are responsible for managing the region's finances, database submissions, training activities and accomplishment reporting. NEPDN personnel provide leadership and direction for a number of significant national program activities. NEPDN personnel manage diagnostic programs and projects, implement improvements and new features within the national database system, are in the process of creating a Sentinel Plant Network (SPN) in collaboration with public gardens, are establishing a laboratory accreditation system named STAR-D (System for True, Accurate and Reliable Diagnostics), and manage and maintain the national NPDN website with public and member access levels.

Plant Disease Diagnostic Clinic (PDDC): The Cornell University PDDC provides diagnostic testing services for anyone interested in determining the cause of plant problems. The PDDC uses microscopic, morphological, serological, and molecular techniques to diagnose plant problems. The PDDC serves as the NYS Department of Agriculture and Market's plant pathology laboratory and provides diagnostics for routine, single sample materials and vast survey programs. The PDDC also provides diagnostics for surveys conducted by the US Forest Service.



NPDN diagnosticians participating in advanced technique training at USDA facility in Beltsville, MD.

Program Justification:

NEPDN: The NEPDN and the National Network were created as part of Agricultural Bioterrorism Act of 2002. To unify preexisting land-grant university laboratories in a network that would provide its members with training, support, equipment, materials, detection methods, and reporting procedures.

Plant Disease Diagnostic Clinic (PDDC): The Department of Plant Pathology and Plant-Microbe Biology is committed to providing diagnostic services to NYS residents.

Impact to Industry:

NEPDN: NEPDN regional members share information so they can conduct accurate diagnoses, learn new techniques, increase surveillance for high-risk pests and pathogens, and contribute to the health of American agriculture via timely submission of identifications to the NEPDN National Repository.

Plant Disease Diagnostic Clinic: Since 1970, the PDDC services have identified pathogens and abiotic disorders for NYS residents and national clients, resulting in the use of proper cultural and chemical options for the management of the problems. The clinic's personnel have participated in individual sample and large surveys resulting in the identification of significant pathogens. Training of green industry members and master gardeners has given these clients the tools needed to determine what is causing their plant problems or given them the ability to determine when materials need to be submitted to the clinic for analyses.

NEPDN and Plant Disease Diagnostic Clinic (PDDC):

Together the NEPDN and PDDC staff members have discovered first identifications for NYS or significant finds of *Plum pox virus*, *Chrysanthemum white rust*, *Japanese apple rust*, *Soybean vein mosaic virus*, *Phytophthora ramorum* and *Ralstonia solanacearum* R3B2.

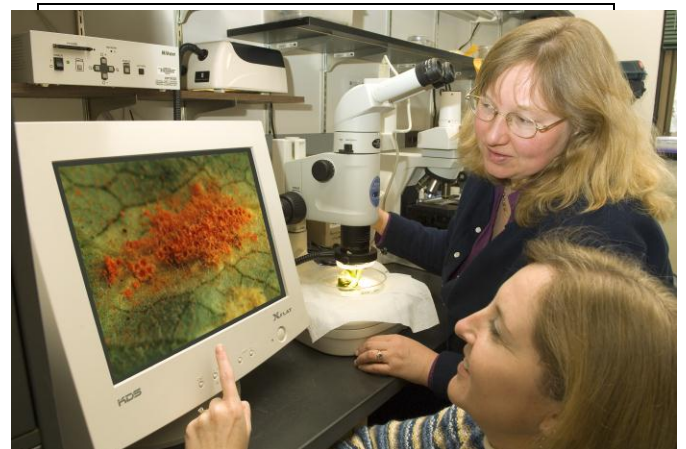
Program Team Members:

NEPDN:

George Hudler, Director
Karen Scott, IT Specialist
Rachel McCarthy, Education & Training Coordinator

Plant Disease Diagnostic Clinic:

Sandra Jensen, Extension Specialist
Molly Swartwood, Laboratory Technician



Cornell University diagnosticians discuss microscopic fungal structures.