NPDN
NATIONAL PLANT DIAGNOSTIC NETWORK

THE CASE FOR A PLANT DIAGNOSTIC NETWORK

ISSUE – INADEQUATE PLANT DIAGNOSTICS CAPACITY

- In 2002, the U.S. capability, capacity, and preparedness for early detection and accurate diagnosis of the plant pests and pathogens were inadequate.
- Aging plant diagnostic infrastructure and technologies, inadequate staffing levels, and the risk of increasing emergence and introduction of pests and pathogens underscored the vulnerability of U.S. agriculture.
- The potential for intentional introductions added a sense of urgency to address those deficiencies.

APPROACH

- USDA established the National Plant Diagnostic Network (NPDN) implemented through land grant university system.
- Five Regional Centers were established to coordinate the states in their region and provide administrative oversight.
- NPDN created programs to educate diagnosticians, enhance diagnostic quality, and strengthen communications among diagnostic labs, state and federal regulatory agencies, and the USDA.

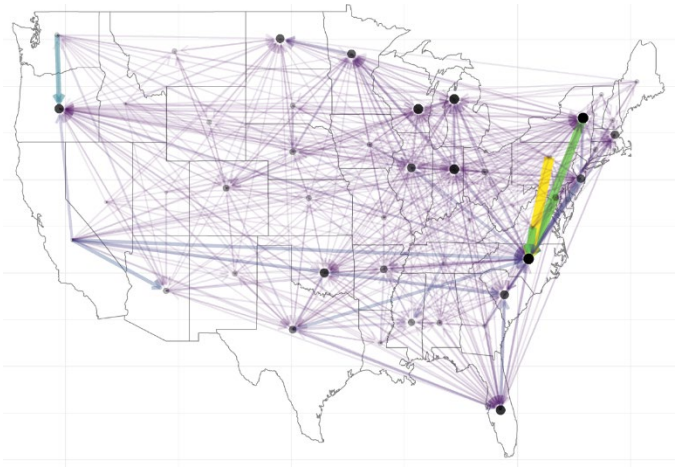

Figure 1. A Network of interconnected labs through the US

RESULTS

- Since its inception, the NPDN labs have contributed to numerous state and national plant health emergency response efforts.
- NPDN has become a model for government-university relations in the U.S. and a model for collaborative diagnostics.
- The NPDN was recognized as an important and effective partner in protecting plant systems by the USDA National Institute of Food and Agriculture (innovative program award 2010) and the National Plant Board (Outstanding Partnership Award 2023).

February 5, 2024

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IMPACTS

Plum pox virus was eradicated from the US in 2019 thanks to extensive survey and testing efforts supported by NPDN labs in several states. Photo by John Hammond. Bugwood.org

Screening for *Ralstonia solancearum*, allowed the Michigan greenhouse industry to continue selling healthy plants. Photo by Robert Killips, Lansing State Journal

Fungicide resistance testing for potato black dot in Florida, halted disease spread by helping managers use the correct fungicide. Photo UF-IFAS Plant Diagnostic Center

Wheat farmers in the mid-west can implement timely management decisions thanks to testing and expertise offered by the Kansas NPDN lab.

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