New Mexico State University Plant Diagnostic Clinic

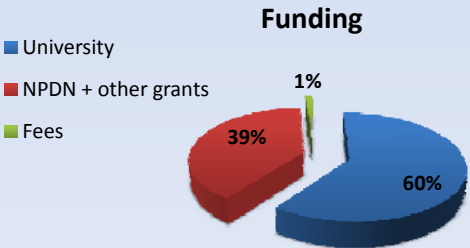## Jason M. French and Natalie P. Goldberg
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Lab Development

The New Mexico State University Plant Diagnostic Clinic provides diagnostic services, First Detector Training and Plant Pathology related workshops for the state of New Mexico. The clinic serves as a support lab for the New Mexico Department of Agriculture and the National Plant Diagnostic Network (NPDN). Since 2004, New Mexico State University has participated in the NPDN's western region. With assistance from NPDN and other diagnostic grants, our clinic has grown from a poorly funded, single discipline diagnostic clinic that processed approximately 350 disease samples annually; to a well funded, integrated clinic that now processes approximately 9,000 disease, insect and plant identification samples. The diagnostic capability of the clinic has improved through increases in clinic staff and equipment. Although still limited, our molecular diagnostics continue to grow. As a result of increased capability, we have identified several new pathogens in New Mexico. Among the most interesting include: Xylella fastidiosa in chitalpa, grapes and catalpa, Septoria leaf spot and Alternaria leaf spot of pistachio, apple mosaic virus in hops, and tomato spotted wilt virus in cowpea. Our educational programming efforts have also increased significantly with the continued support from the NPDN. This support has enabled us to reach a much broader range of clientele. To date, a total of 4,236 people have been introduced to the NPDN with 418 being trained as Certified First Detectors.

	1993	1999	2004	2009
Funding	University $25,000	University & USDA $50,000	University & NPDN $90,000	Univ., NPDN & grants $110,000
Personnel	Director	Director Students	Director Clinician	Director Clinician Students
Lab Space	No	Yes	Yes	Yes
Integrated Lab	No	No	Yes	Yes
Total Samples	350	1,300	6,300	9,000

Funding

- University
- NPDN + other grants
- Fees

1%
39%
60%

Diagnostics
New Pathogen Discoveries

Advanced symptoms of Septoria leaf spot

Anthracnose of lucky bamboo
Colletotrichum dracaenophilum

Tomato Spotted Wilt Virus of Cowpea

Pierce's disease *Xylella fastidiosa* of Grape

Alternaria late blight foliar symptoms

Setae of *Colletotrichum dracaenophilum*

X *Chitalpa tashkentensis* infected with *Xylella fastidiosa*

Northern Catalpa infected with *Xylella fastidiosa*

Education
First Detector Training

Since 2004, New Mexico State University has participated in the National Plant Diagnostic Network's First Detector Training Program. Educational programs on this topic have been provided to a wide range of clientele. Our program consisted of several different types of training including public relations programs, expanded awareness trainings and Certified First Detector courses. In 2009 we added a continuing education course for previously certified First Detectors. This training included modules on high risk arthropods and invasive weed species. Upon completion of the Certified First Detector Training course all participants received First Detector Training Kits. The kits are fanny packs designated with NPDN, Agro Guard and NMSU logos and filled with supplies for field collection of pests and diseases. The kit contains: a hand lens, pocket knife, Ziploc bags, tweezers, insect vials with ethanol, paper notepad, pen, permanent marker, and the NMSU Plant Diagnostic Clinic contact information.

First Detector Training Program

85
418
1184
2549

- Public Relations Participants
- Expanded Awareness Participants
- Certified First Detector Training Course Participants
- Advanced First Detector Training Course Participants