National Plant Diagnostic Network

# Mission of the National Plant Diagnostic Network

Adapted for FIRST DETECTOR training in Texas by K. Ong
Updated, June 2013

McKellar. December 2006.
Update, August 2008.
NPDN Publication No. 0015

MODULE 1 – Mission of the NPDN

## Need for Plant Biosecurity

Maintain profitability of crop production

Invasive species cost $ billions/year

Maintain security of food production

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## Impact of Introduced Pathogens

### Historical High Impact Epidemics

**Late Blight of Potato in Ireland**

**Dutch Elm Disease and Chestnut Blight in North America**

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## Impact of Introduced Insects

Recently Introduced Insects

- Asian Longhorn Beetle
  - Its impact could surpass Dutch Elm Disease and Chestnut Blight
- Emerald Ash Borer
- Soybean Aphid

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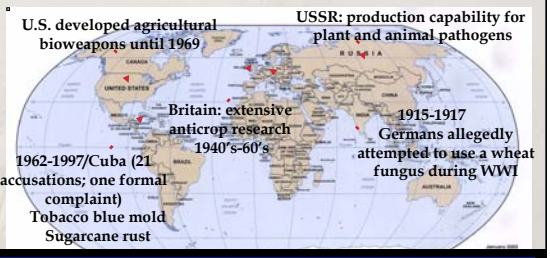
## Is Ag Bio-Terrorism a Real Threat?




Agricultural bio-weapons programs are not new: the threat is real

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## 9/11 and Aftermath

Homeland Security

Dept. of Homeland Security (DHS) formed in 2002.

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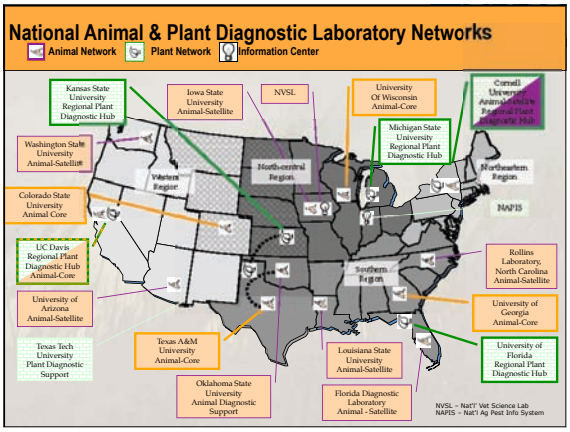
## Agricultural Bioterrorism Act of 2002

- Federal Register, December 13, 2002
- Possession, Use and Transfer of Biological Agents and Toxins.
- Lists Select Agent Pathogens for Animals and Plants.
  - *7 CFR Part 331*
    - Agricultural research, Laboratories, Plant diseases and pests, Reporting and record keeping requirements.
  - *9 CFR Part 121*
    - Agricultural research, Animal diseases, Laboratories, Medical research, Reporting and record keeping requirements.

## National Animal & Plant Diagnostic Laboratory Networks

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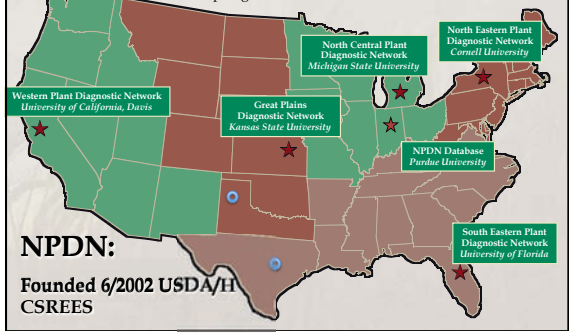
## What Does NPDN Look Like?

Apologies to Alaska, Hawaii, PR and Guam




**NPDN:**

**Founded 6/2002 USDA/H**
**CSREES**

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## NPDN Mission

**Enhance national agricultural security by quickly detecting and identifying introduced pests and pathogens.**

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## Method

- Create a nationwide network of land-grant universities
- Provide training to first detectors and diagnosticians
- Establish protocols for reporting to responders and decision makers

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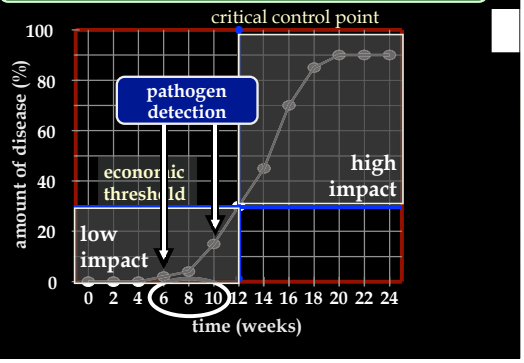
## Network Responsibilities

- Outbreak detection and identification
- Secure communications system
- Information storage and management
- Data analysis
- Reporting and alerts
- Training

Minimize Impact

## Importance of Early Detection

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## Your role as a First Detector

- Be alert to the unusual or different
- Receive NPDN First Detector or First Detector Educator training
- Be placed on a national notification registry of First Detectors
- Receive pest alerts and other relevant updates

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## Acknowledgments


- Some of the material for this presentation was adapted from the NPDN core Module 1
  - Holmes, G., K. Wright, H. Beck, and T. Creswell. (February 2004, updated 2006). Module 1: The NPDN Mission and Agricultural Biosecurity. Available currently on the NPDN Training and Education Subcommittee page http://www.npdn.org/ login and password required.
- Some of the material for this presentation was adapted from a modified version of the NPDN Core Module 1 by Dr. Jim Stack, Kansas State University.

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## Opportunities for other First Detector training online

TEXAS A&M AGRILIFE EXTENSION

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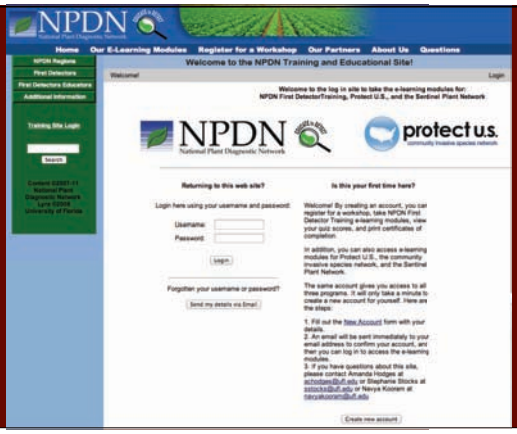
TX PLANT CLINIC


Kevin Ong
Associate Professor & Extension Specialist
Texas Plant Disease Diagnostic Lab

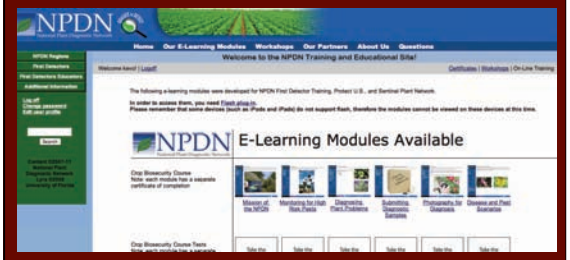
## Why First Detector training?

- *Objective*: give a base level of skills & knowledge regarding plant biosecurity to First Detectors
- First Detectors may be called on to assist in a crop/plant biosecurity event.

*You are our eyes and ears in the field!!!*




## E-learning modules

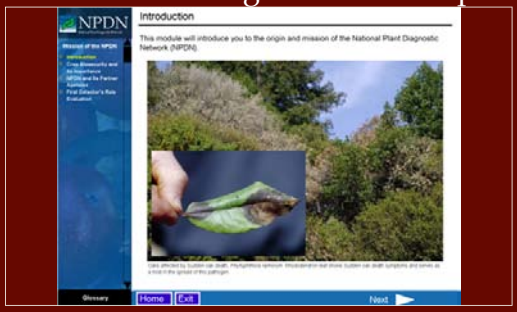



- E-learning modules have interactive features such as quizzes, games and/or short videos.
- Must complete final quiz with a 70% or better to receive certificate of completion


## Benefits of E-Learning module

- **Anytime and anywhere learning experience**
- **Content of training materials is peer review on a regular basis (latest information)**
- **Competency and completion of material is recognized**

## Online e-learning module example

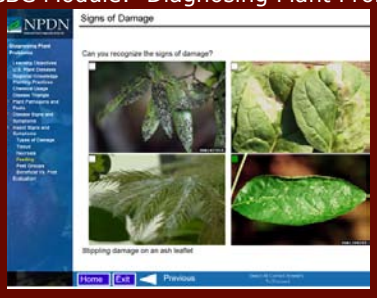


## Online e-learning module example

Core CBC Module: Monitoring for High Risk Pests

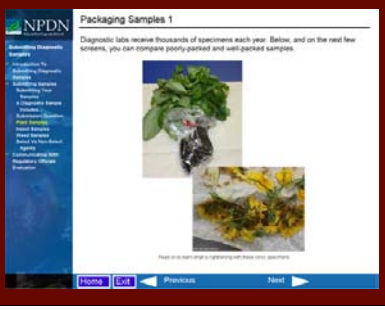

## Online e-learning module example

Core CBC Module: Diagnosing Plant Problems



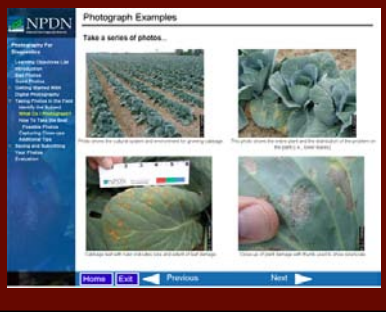

## Online e-learning module example

Core CBC Module: Submitting Diagnostic Samples



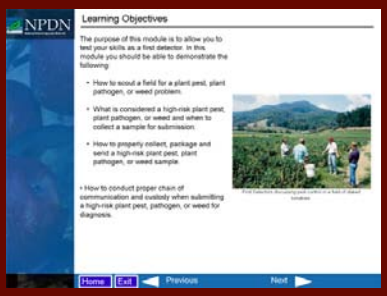
## Online e-learning module example

Core CBC Module: Photography for Diagnosis




## Online e-learning module example

Core CBC Module: Disease and Pest Scenarios




## Online e-learning module example

Special Topic Module: Chilli Thrips

## Online e-learning module example

Special Topic Module: *Ralstonia solanacearum*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