



*Agri*LIFE **EXTENSION**

Texas A&M System

First Detector Program (Plant Diseases, Pests, and Weeds)

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Contact information

- Website: <http://sickcrops.tamu.edu/>
- Go to “homeowners/gardeners” section for First Detector information and plant diseases, pests, and weeds in home gardens.
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What is a SIGN?

The pathogen (or parts of) can be visually observed on the host plant.



What is a SYMPTOM?

External or internal reaction or alteration of a plant due to the disease



Some symptoms include: wilting, leaf spots, leaf curling, root rot, crown rot, stem rot, fruit rot, dieback, damping-off, scorching, leaf blotches, and stunting.

NPDN First Detector Program

- First Detector Training promotes awareness and early detection of exotic pests in the field.
- NPDN recently released a free online professional development program that teaches how to monitor and respond to high-risk insects, weeds, and plant pathogens in crops including food, horticultural, and ornamental growing systems.

NPDN First Detector Modules (1-4)

- Module 1: Mission of the NPDN and Agricultural Biosecurity
- Module 2: Monitoring for High Risk Pests
- Module 3: Quality and Secure Sample Submission
- Module 4: The Art and Science of Diagnosis – Plant Pathogens and Arthropods





NPDN First Detector Modules (5-6)

- Module 5: Response Exercise Scenarios for High Risk Pests (only available online)
- Module 6: Effective Photos for Digital Sample Submission

NPDN First Detector Program

Welcome to the NPDN Training Site

Training for first detectors and resources for session organizers are available in several forms:



[Register for IIPDII First Detector Training Workshops](#)

The NPDN conducts numerous hands-on workshop training sessions each year.



[Take the On-Line Training Modules](#)

Interactive features include simulations, games and assessments for certification.



[View IIPDII Training Session Data Management Facilities](#)

Tools for session, state, regional, and national coordinators.



NPDN First Detector Program

First Detector Training for the Master Gardener

From BugwoodWiki

NPDN-MG-Training



The National Plant Diagnostic Network

Training and Education Committee has created this page to provide an easily accessible source of information, presentation materials, and images related to the detection of exotic or newly introduced plant pests. Below, you will find links to fact sheets on the species of concern to the NPDN. At the end of the fact sheet, you will find a gallery of images that are representative of these organisms and a link to download presentation materials that may be used to educate various groups such as master gardeners, garden clubs and homeowners about these pests.

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Insects

- African Citrus Psyllid (*Trioza erytrae*)
- Arrowhead scale (*Unaspis yanonensis*)
- Asian Ambrosia Beetle (*Xyleborinus saxeseni*)
- Asian Gypsy Moth (*Lymantria dispar dispar*)
- Asian Longhorned Beetle (*Anoplophora glabripennis*)
- Citrus Longhorned Beetle (*Anoplophora chinensis*)
- Bed Bugs (*Cimex lectularius*)
- Sweetpotato whitefly (*Bemisia tabaci biotype Q*)
- Brown marmorated stink bug (*Halyomorpha halys*)
- Cassava mealybug (*Phenacoccus manihoti*)
- Chilli Thrips (*Scirtothrips dorsalis*)
- Coffee mealybug (*Planococcus lilacinus*)
- Colorado Potato Beetle (*Leptinotarsa decemlineata*)
- Diaprepes Root Weevil (*Diaprepes abbreviatus*)
- Egyptian Cottonworm (*Spodoptera littoralis*)
- Emerald Ash Borer (*Agrilus planipennis*)
- European Crane Flies (*Tipula spp.*)
- Hemlock Woolly Adelgid (*Adelges tsugae*)
- Japanese wax scale (*Ceroplastes japonicas*)
- Light Brown Apple Moth (*Epiphyas postvittana*)
- Old World Bollworm (*Helicoverpa armigera*)
- Pine Shoot Beetle (*Tomicus piniperda*)
- Potato psyllid (*Russelliana solanicola*)
- Red Palm Mite (*Raoiella indica*)
- Redbay Ambrosia Beetle (*Xyleborus glabratus*)
- Sirex Woodwasp (*Sirex noctilio*)
- *Spodoptera litura*
- Sugarcane silk floss aphid (*Ceratovacuna lanigera*)
- Suni Bug (*Eurygaster integriceps*)
- Swede Midge (*Contarinia nasturtii*)
- Viburnum Leaf Beetle (*Pyrrhalta virburni*)
- Winter Moth (*Operophtera brumata*)
- Black imported fire ant (*Solenopsis richteri*)
- Red imported fire ant (*Solenopsis invicta*)

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Diseases

- Petunia Tobamo Virus
- Pine Wilt Nematode (*Bursaphelenchus xylophilus*)
- Plum Pox Virus
- Potato Cyst Nematode (*Globodera rostochiensis*)
- Potato Mop Top, Mop Top Virus (*Carlavirus PMTV*)
- Rice Blast Disease (*Pyricularia grisea*)
- SOD/Ramorum blight (*Phytophthora ramorum*)
- Bacterial Wilt (*Ralstonia solanacearum* Race 3 Biovar 2)
- Apple Scab (*Venturia inaequalis*)
- Weirs Cushion Rust (*Chrysomyxa weirii*)
- White Pine Blister Rust (*Cronartium ribicola*)
- Phytophthora root rots (*Phytophthora* spp.)
- Asian soybean rust (*Phakopsora pachyrhizi*)
- Bacterial leaf Scorch (*Xylella fastidiosa*)
- Bacterial ring rot/canker (*Clavibacter michiganensis* subsp. *michiganensis*)
- Bakanae Disease (*Gibberella fujikuroi*)
- Chrysanthemum White Rust (*Puccinia horiana*)
- Citrus greening (*Liberibacter asiaticus*)
- Downy Mildew of Cucurbits (*Pseudoperonospora cubensis*)
- Geranium Bacterial blight (*Xanthomonas campestris* pv. *pelargonii*)
- Gladiolus Rust (*Uromyces transversalis*)
- Golden Nematode (*Globodera rostochensis*)
- Hosta Virus X
- Laurel Wilt (*Raffaelea lauricola*)
- Oak Wilt (*Ceratocystis fagacearum*)

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Weeds

- Asiatic Sand Sedge (*Carex kobomugi*)
- Autumn olive (*Elaeagnus umbellata*)
- Black Swallowwort (*Cynanchum nigrum*)
- Brazilian elodea (*Egeria densa*)
- Common Reed (*Phragmites australis*)
- Eurasian water-milfoil (*Myriophyllum spicatum*)
- Garlic mustard (*Alliaria petiolata*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Hydrilla (*Hydrilla verticillata*)
- Japanese barberry (*Berberis thunbergii*)
- Japanese honeysuckle (*Lonicera japonica*)
- Japanese knotweed (*Polygonum cuspidatum*)
- Japanese Stilt Grass (*Microstegium vimineum*)
- Kudzu (*Pueraria montana*)
- Mile-a-minute (*Polygonum perfoliatum*)
- Multiflora rose (*Rosa multiflora*)
- Oriental bittersweet (*Celastrus orbiculatus*)
- Purple Loosestrife (*Lythrum salicaria*)
- Tamarisk (Salt Cedar) (*Tamarix ramosissima*)
- Tree of Heaven (*Ailanthus altissima*)
- Water Chestnut (*Trapa natans*)
- Winged euonymus (*Euonymus alatus*)
- Buckthorn (*Rhamnus cathartica*)
- Buckthorn (*Frangula alnus*)

NPDN First Detectors: What's there for you?

- Handouts and training resources
- Knowledge of where to submit samples and valuable information regarding high-risk pests
- Certificate of completion
- Receive NPDN First Detector newsletter (optional)
- Some diagnostic clinics may provide vouchers for free sample submission to participants

NPDN First Detectors: Action plan

- Go to: www.npdn.org to sign up for First Detector Training.
- Take the training modules at your own pace.
- Become a First Detector.
- Start Detecting.

- For more information on diseases, pests, and weeds, go to: <http://sickgardens.tamu.edu> or <http://healthygardens.tamu.edu>