Sentinel Plant Network

Daniel Stern
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American Public Gardens Association
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APGA

NPDN National Plant Diagnostic Network

APHIS

APGA

CONTINENTAL DIALOGUE ON NON-NATIVE FOREST INSECTS & DISEASES
November 4 & 5, 2013
Pittsburgh, PA

Program Overview

The Sentinel Plant Network (SPN) is a collaboration between the American Public Gardens Association (APGA) and the National Plant Diagnostic Network (NPDN) and is funded through the USDA's Animal and Plant Health Inspection Service (APHIS).

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NPDN National Plant Diagnostic Network

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Program Overview

Our Mission: *To contribute to plant conservation by engaging public garden professionals, volunteers and visitors in the early detection of high-consequence plant pests and pathogens.*

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NPDN National Plant Diagnostic Network

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APGA = Capacity

- 500+ APGA member gardens
- 10,000+ public garden professionals
  - 61% of gardens surveyed are monitoring their collections regularly and 29 % when possible[1]
  - 84% of gardens seek assistance with insect ID and 88% with plant diseases[1]

[1] Kramer, A. and A. Hird. 2011. Building an International Sentinel Plant Network. *BG-Journal*. Vol. 8 (2).

Program Overview

NPDN
National Plant Diagnostic Network

= *Expertise*


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© Dawn Dailey O'Brien, Cornell University

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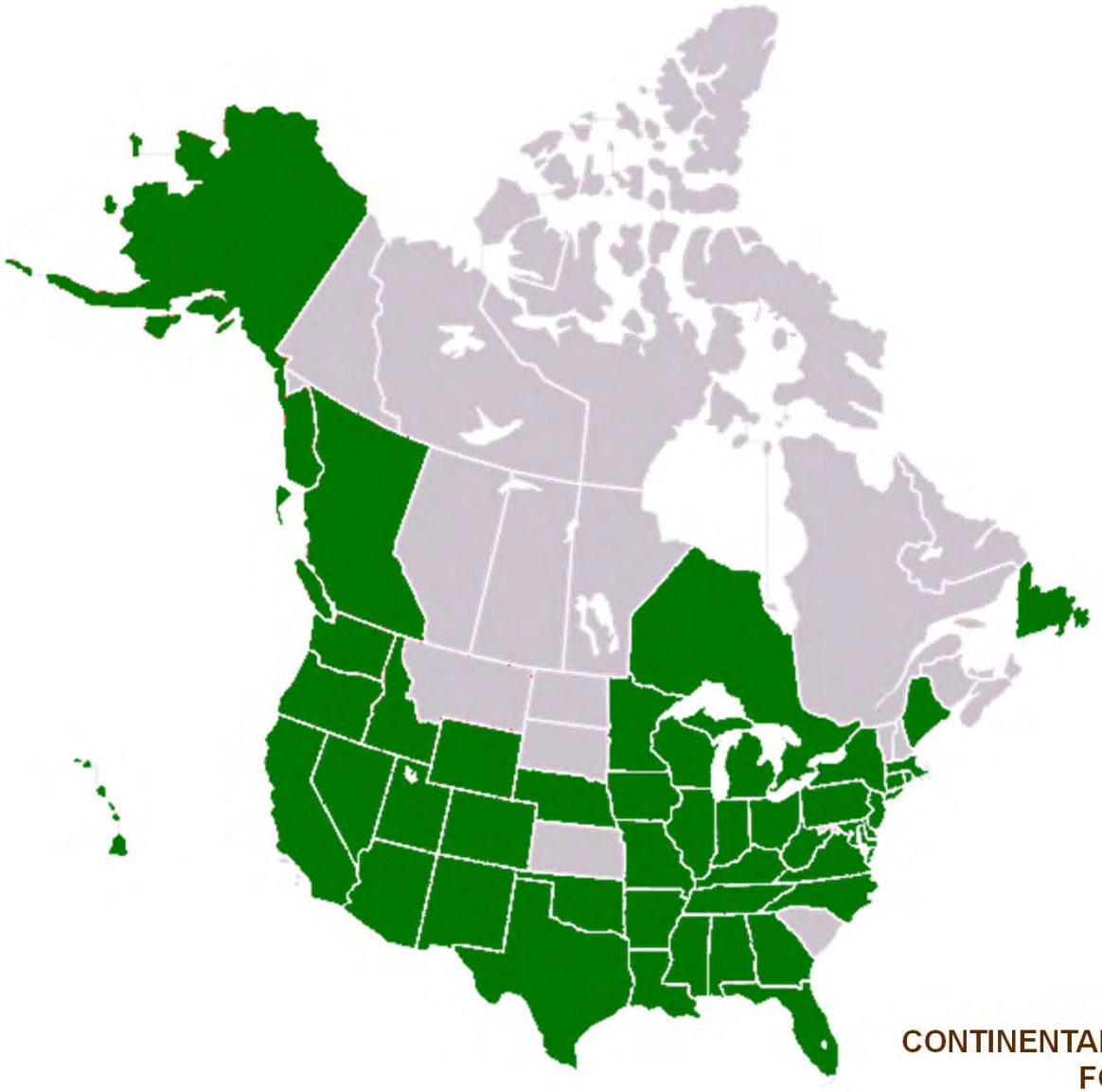
Program Overview



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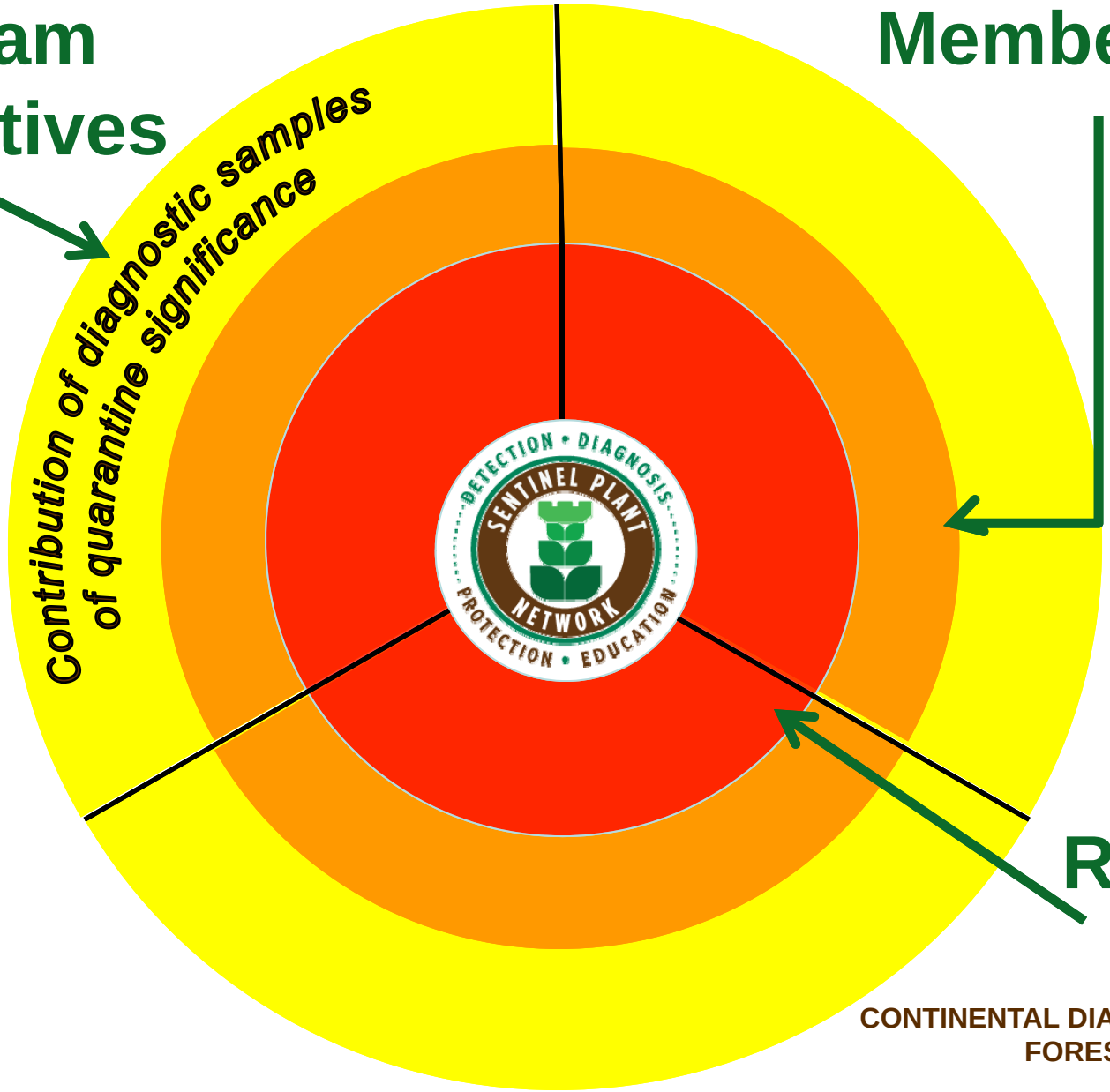
Program Overview

Program Objectives

Contribution of diagnostic samples of quarantine significance

Member Garden Activity

SPN Resources



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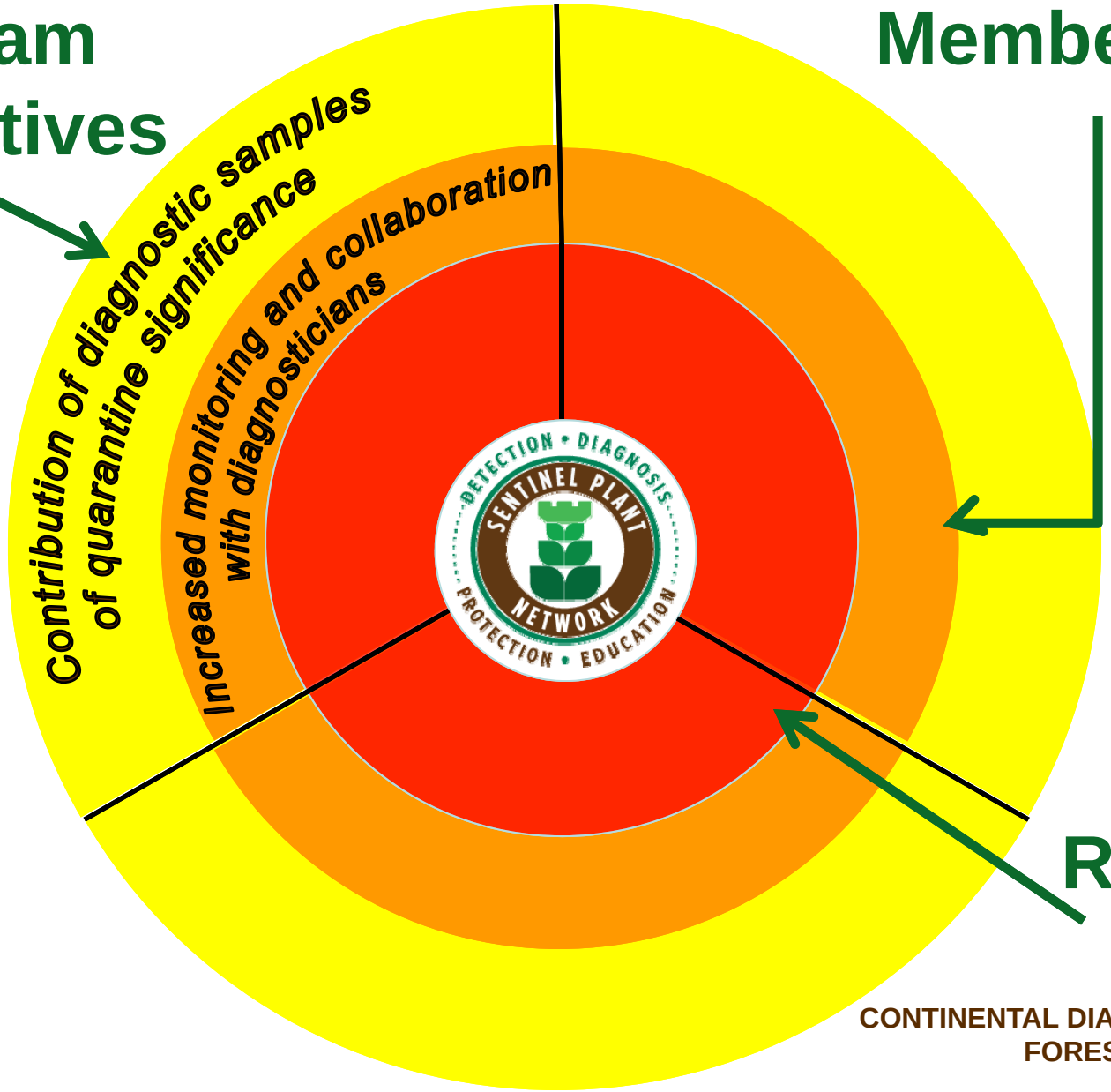

Member Garden Activity

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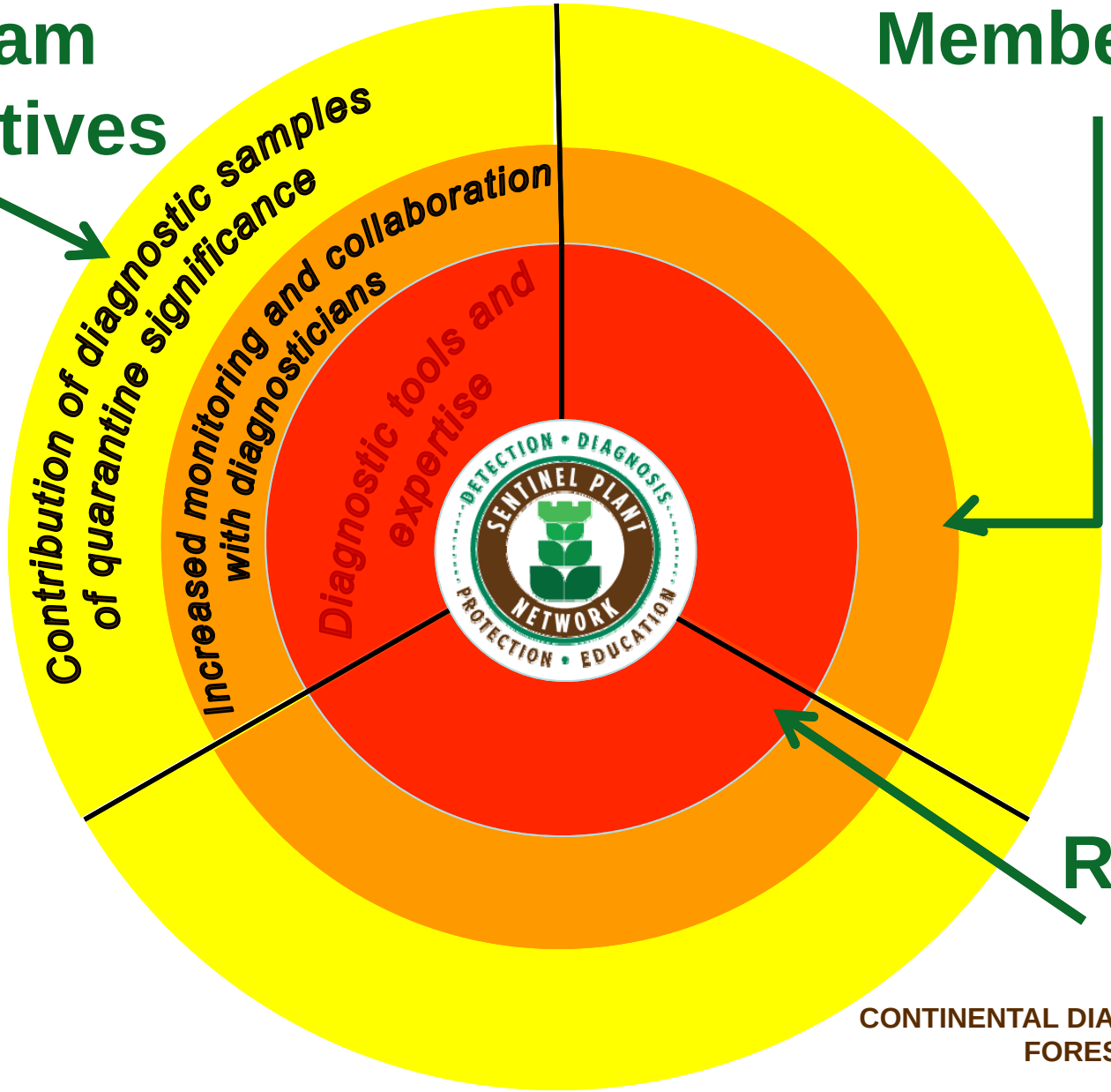

Member Garden Activity

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Pittsburgh, PA

Regional Workshops

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Monitoring and Reporting

The Garden Evolution Conference 2013 PHOENIX

2013 APGA Conference

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SPN Southeast Regional Chapter

This chapter of the Sentinel Plant Network provides regionally focused resources about high-consequence plant pests and diseases so that member gardens can monitor, identify and respond to these threats more effectively. The online discussion space enables members from different gardens to communicate about emerging issues with one another and with other stakeholders from the Southeast region such as diagnosticians from the National Plant Diagnostic Network and regulatory officials from the USDA's Animal and Plant Health Inspection Service.

Use the link below to join this section. If you are already a member and need help to add a resource, contribute to the discussion, or manage your subscription, please refer to our FAQ page.

Resources

The Arnold Arboretum's ALB management plan (June 2010)
12/19/2012 - 2:13pm

The Arnold Arboretum's ALB monitoring protocol (June 2010)
12/19/2012 - 2:08pm

View All Resources
Add Resource

Discussions

APHIS Eradicates the Asian Longhorned Beetle from Middlesex and Union Counties, New Jersey
04/03/2013 - 4:15pm
Submitted By:
dstern@publicgardens.org

APHIS March 2013 Updates on Asian Gypsy Moth (AGM) and Shipping Requirements
04/03/2013 - 4:05pm

View All Discussions
Add New Topic

Members

BETH HALL
4/22/13

PEDRA SAGE
4/4/13

RACHEL MCCARTHY
4/4/13

CASEY SCLAR
1/26/13

KRISTI ORCUTT
1/15/13

ROBERT MOTTERN

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Reporting Resources

SPN Packing Slip

NPDN Diagnostic Lab Contact Information

Click on the abbreviation for your state to be taken directly to that entry.

AL, AK, AZ, AR, CA, CO, CT, DE, FL, GA, HI, ID, IL, IN, IA, KS, KY, LA, ME, MD, MA, MI, MN, MS, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VT, VA, WA, WV, WI, WY; Canada

Alaska

Cooperative Extension Service, University of Alaska

P.O. Box 75-8155

1000 University Ave

Fairbanks, AK 99775

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SPN Packing Slip

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Please use this packing slip **whenever** you are submitting a plant sample for diagnosis so that we can document the contribution that public gardens are making to the knowledge about plant pests and diseases!

After you have entered the information about the sample here, click "submit" and a preprinted packing slip will be emailed to you. Please print and include this packing slip with the sample submission form from your diagnostic lab. If you need help finding the forms for your state, check the listings on this page.

Name of plant being submitted: *

Where you are sending the sample: *

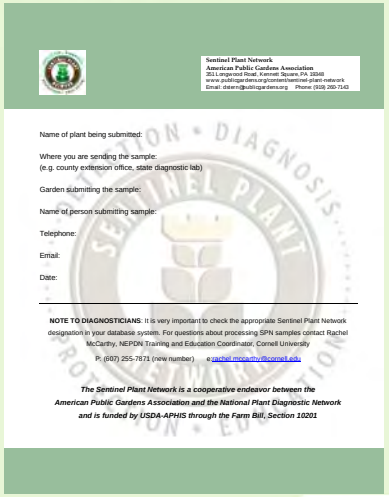
(e.g. county extension office, state diagnostic lab)

Garden submitting the sample: *

Name of person submitting sample: *

Telephone: *

Email: *



Sentinel Plant Network
American Public Gardens Association
351 Longhill Road, Columbia, South Carolina 29210
www.publicgardens.org/programs/sentinel-plant-network
Email: dstern@publicgardens.org Phone: (919) 280-7142

Name of plant being submitted:

Where you are sending the sample:
(e.g. county extension office, state diagnostic lab)

Garden submitting the sample:

Name of person submitting sample:

Telephone:

Email:

Date:

NOTE TO DIAGNOSTICIANS: It is very important to check the appropriate Sentinel Plant Network designation in your database system. For questions about processing SPN samples contact Rachel McCarthy, NEPDN Training and Education Coordinator, Cornell University

P: (607) 255-7871 (new number) e: rachel.mccarthy@cornell.edu

The Sentinel Plant Network is a cooperative endeavor between the American Public Gardens Association and the National Plant Diagnostic Network and is funded by USDA-APHIS through the Farm Bill, Section 10201

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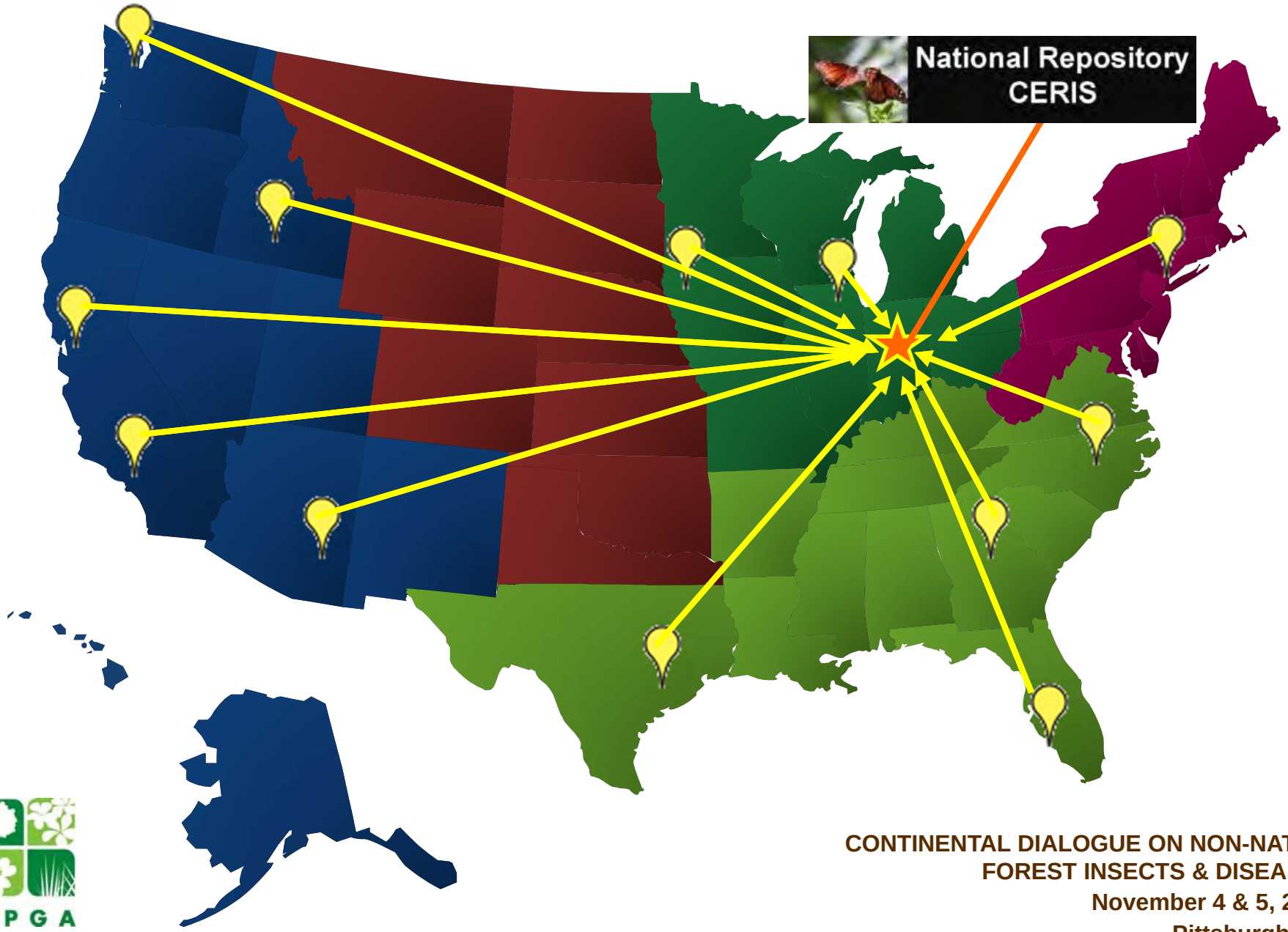

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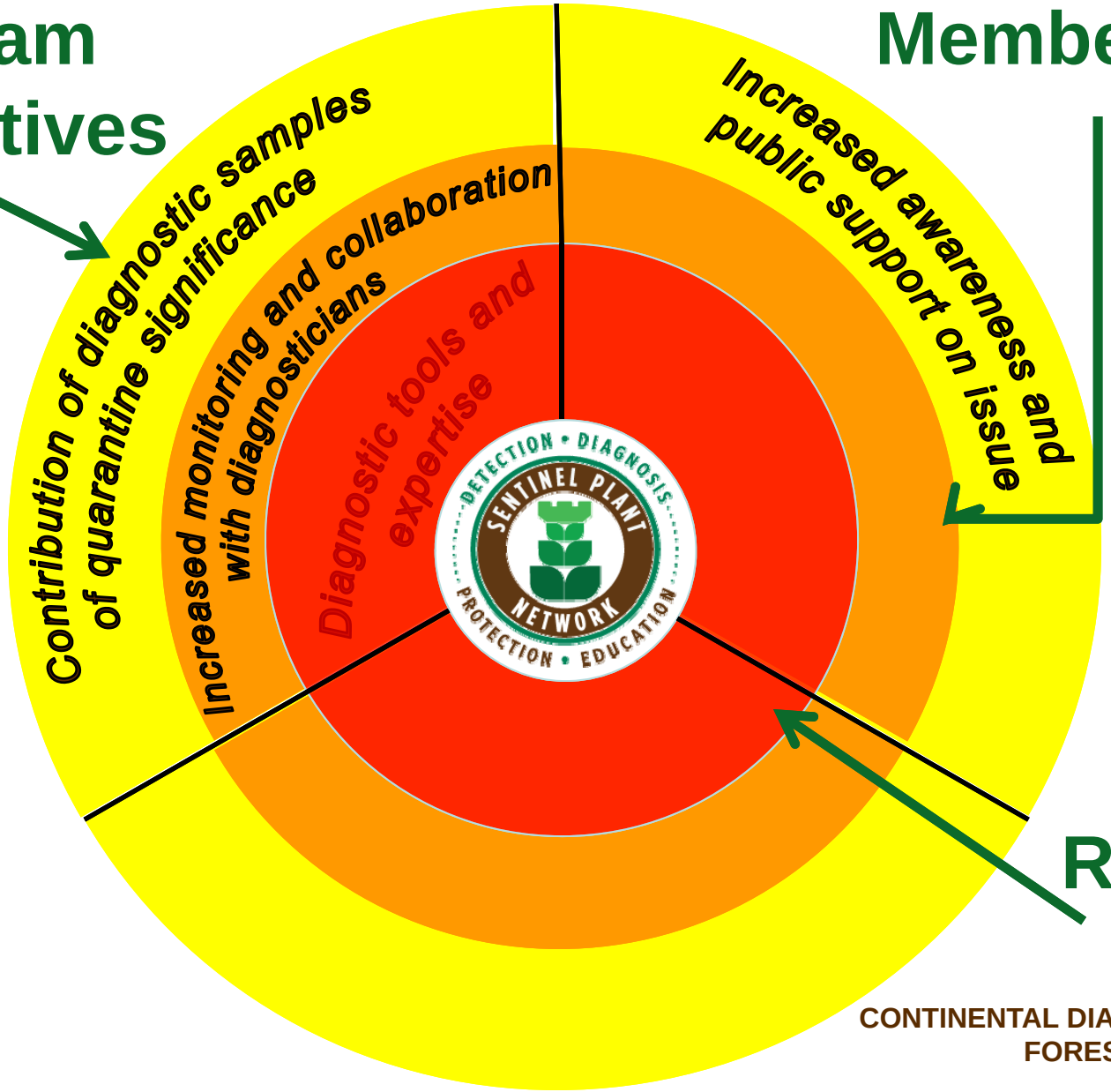
Program Overview

Program Objectives

Member Garden Activity



SPN Resources

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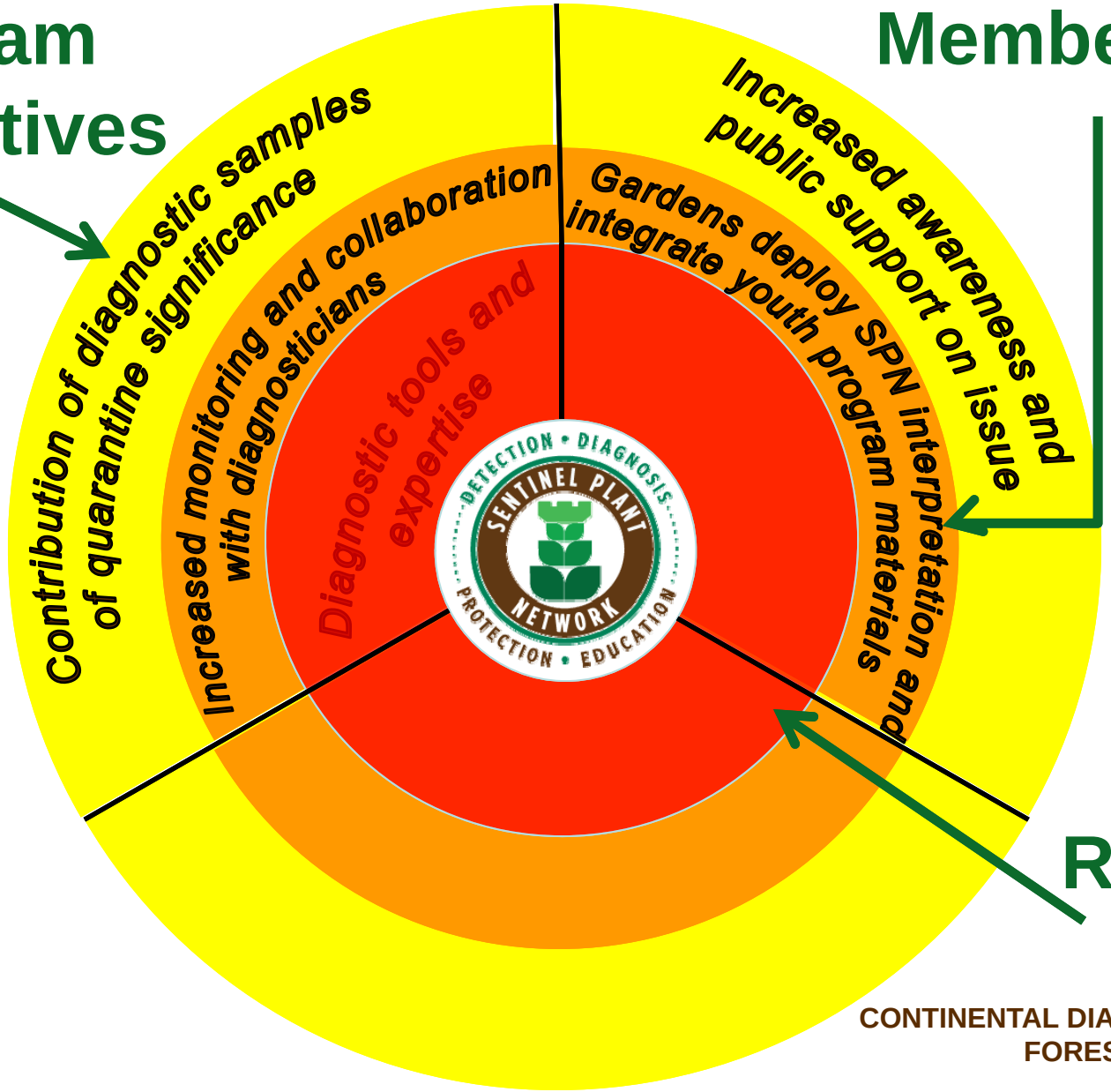

Member Garden Activity

Capacity?

Over 70 million visitors to APGA gardens annually

SPN Resources

APGA

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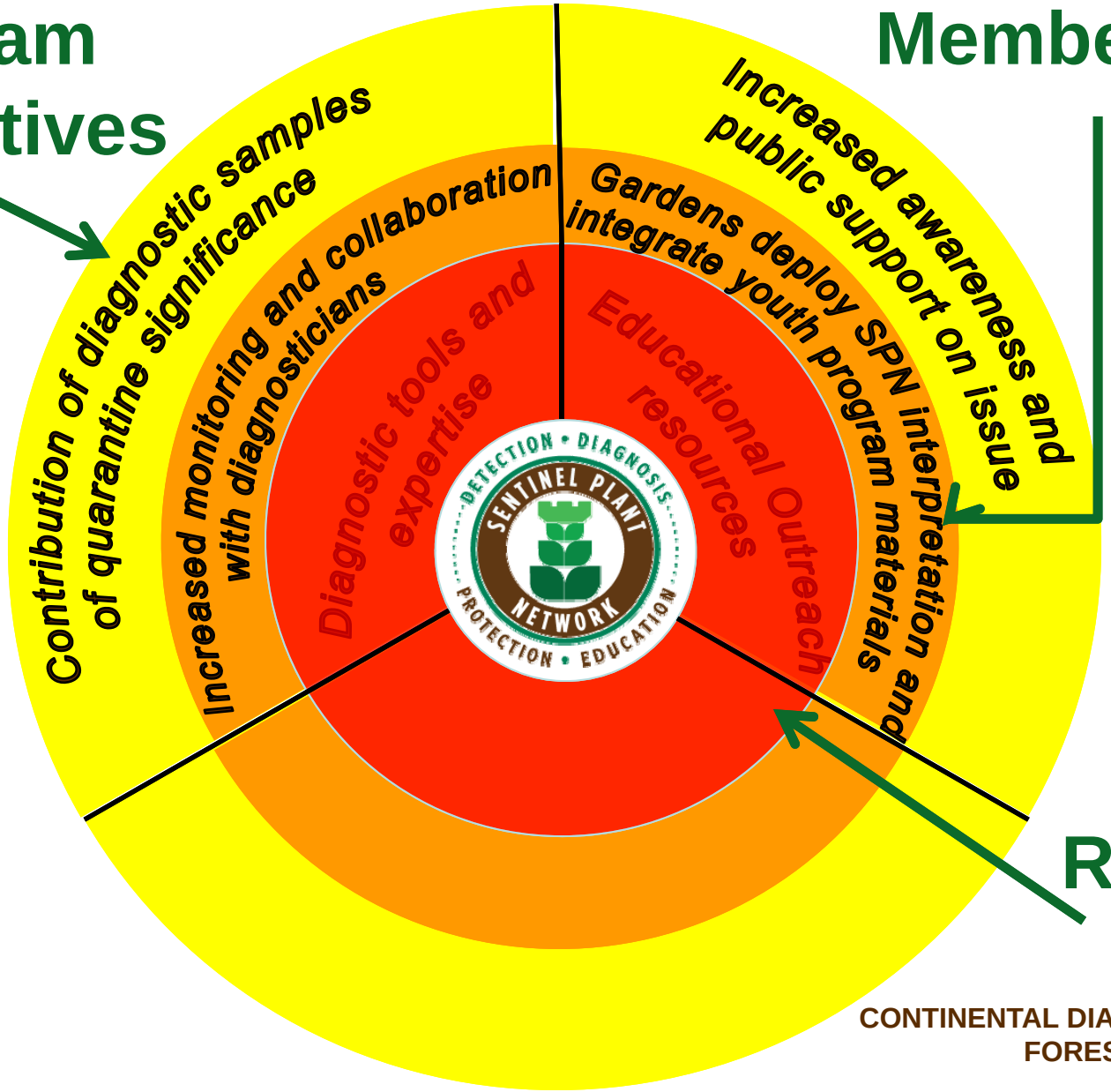
Program Objectives



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Over 70 million visitors to APGA gardens annually

SPN Resources

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Educational Outreach Materials

Public-facing website

– Introduction to various high consequence plant pests and pathogens (impact, life cycle, host species, symptoms

– Links to educational YouTube videos and other web-based resources

www.sentinelplantnetwork.org

Educational Outreach Materials

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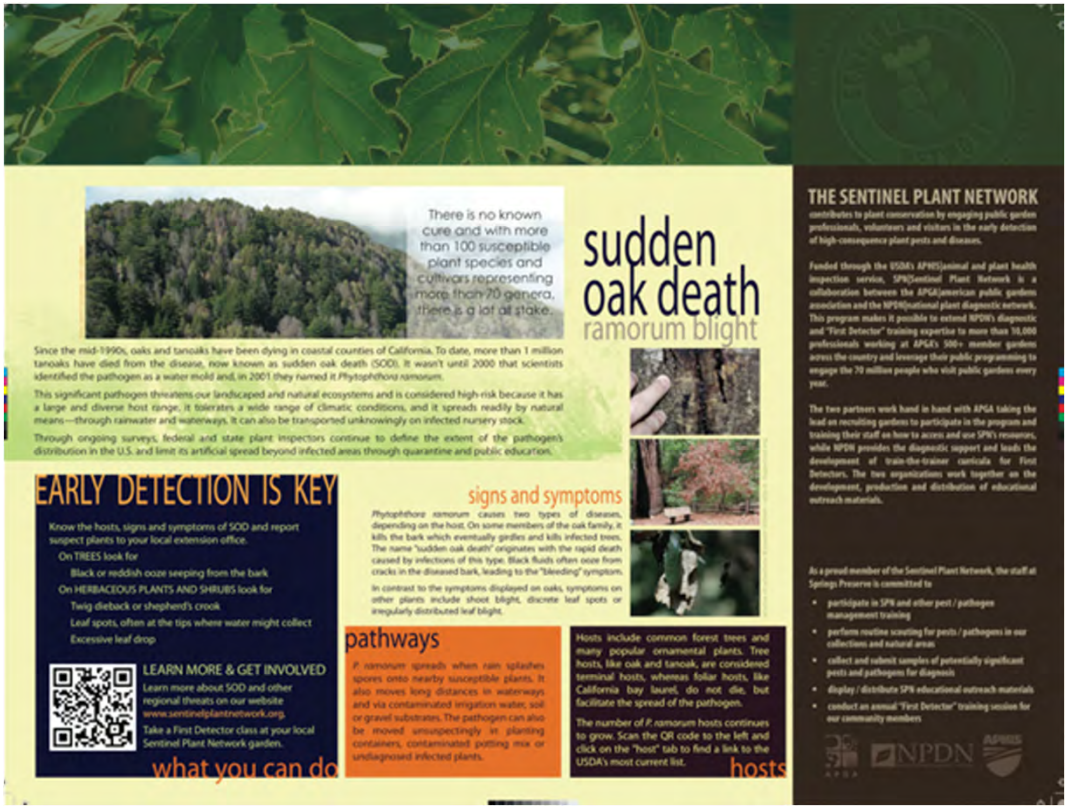

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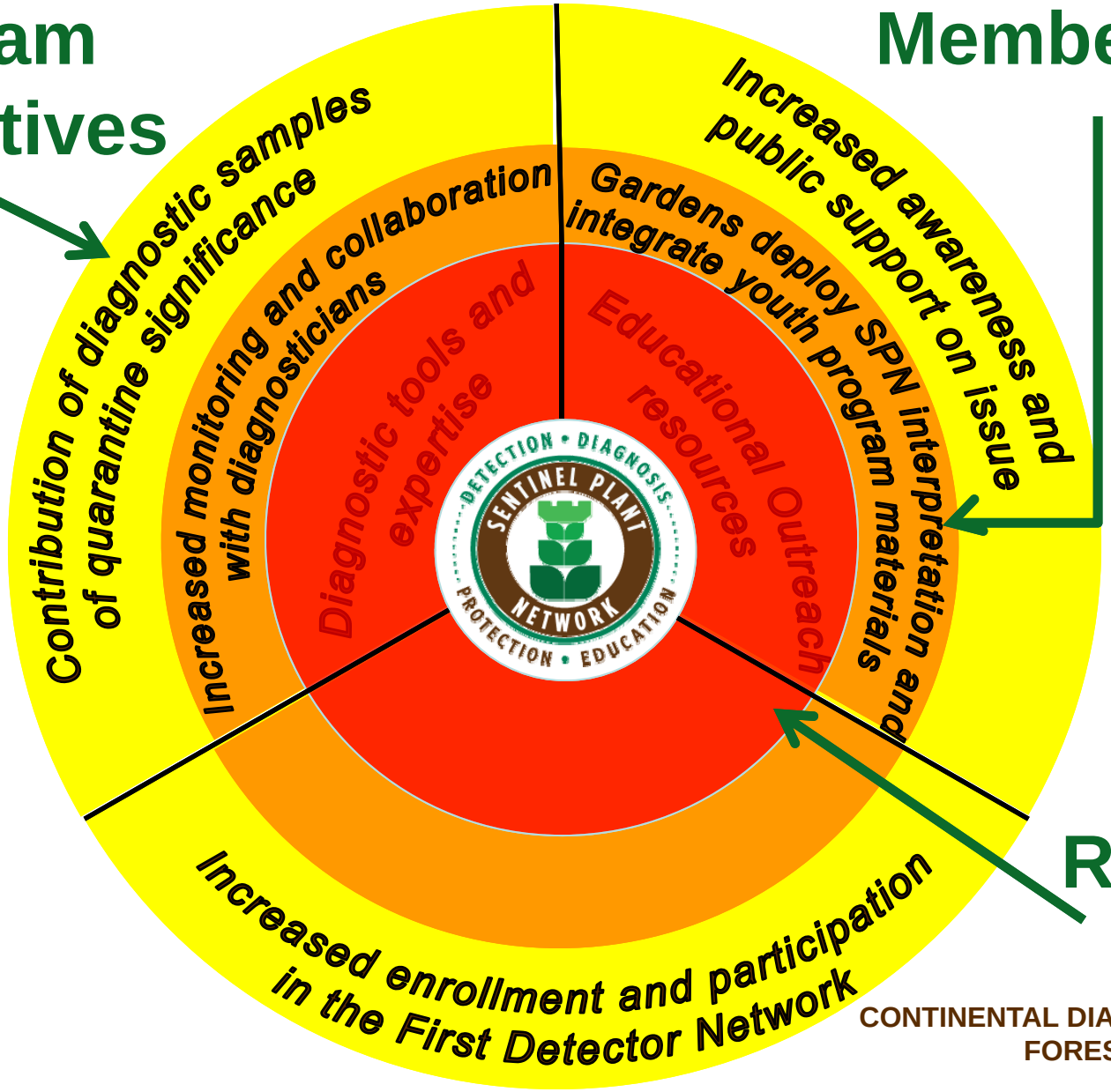

SPN Resources

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Recruiting First Detectors

NPDN
National Plant Diagnostic Network

FD training – the numbers

- Traditional Training
  - Since 2003, over 12,000 participants have attended more than 800 training sessions
- E-learning
  - Since 2009, over 10,000 modules have been completed by registered First Detectors
- First Detector newsletter goes out to over 6,000 registered First Detectors

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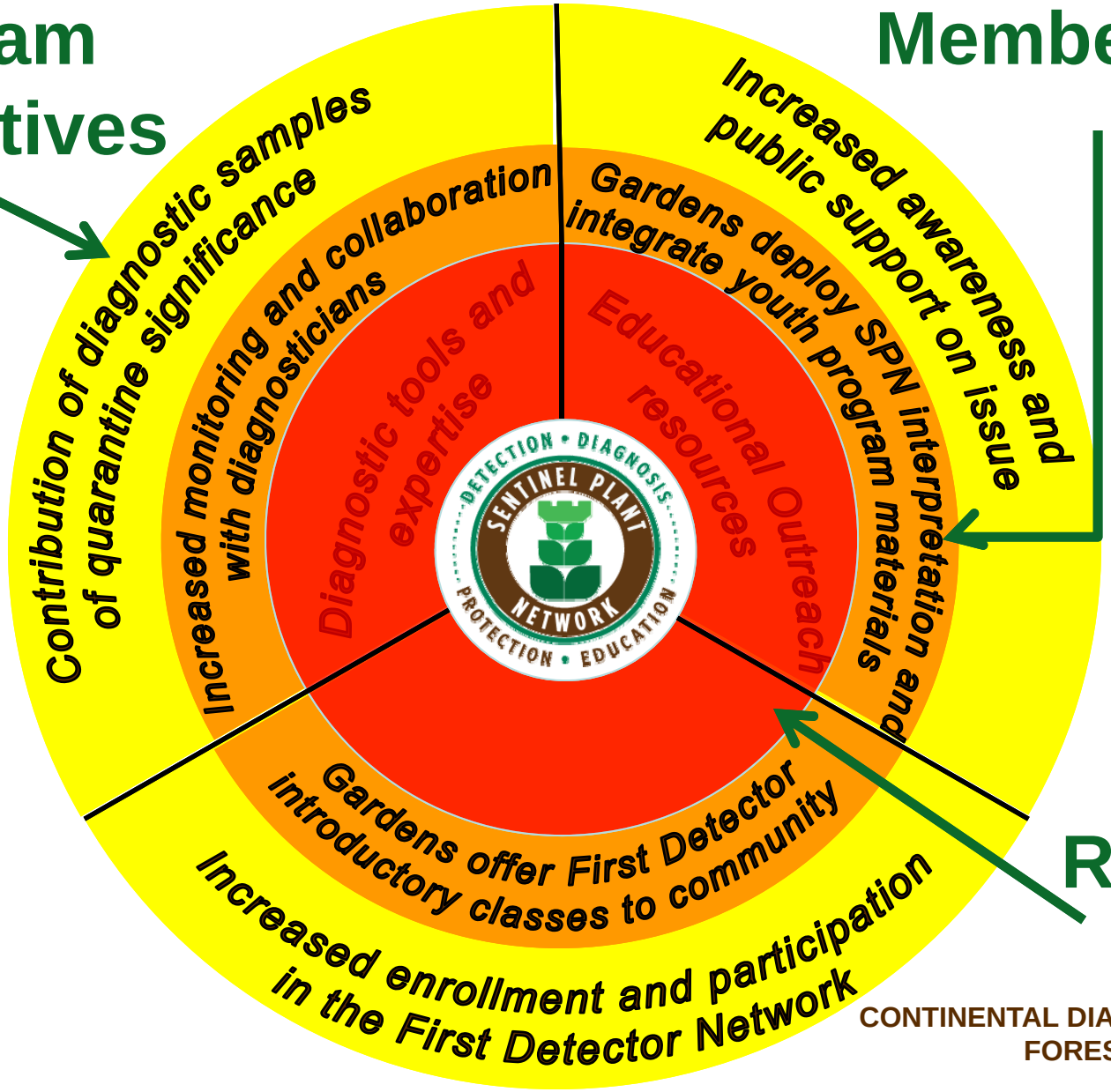

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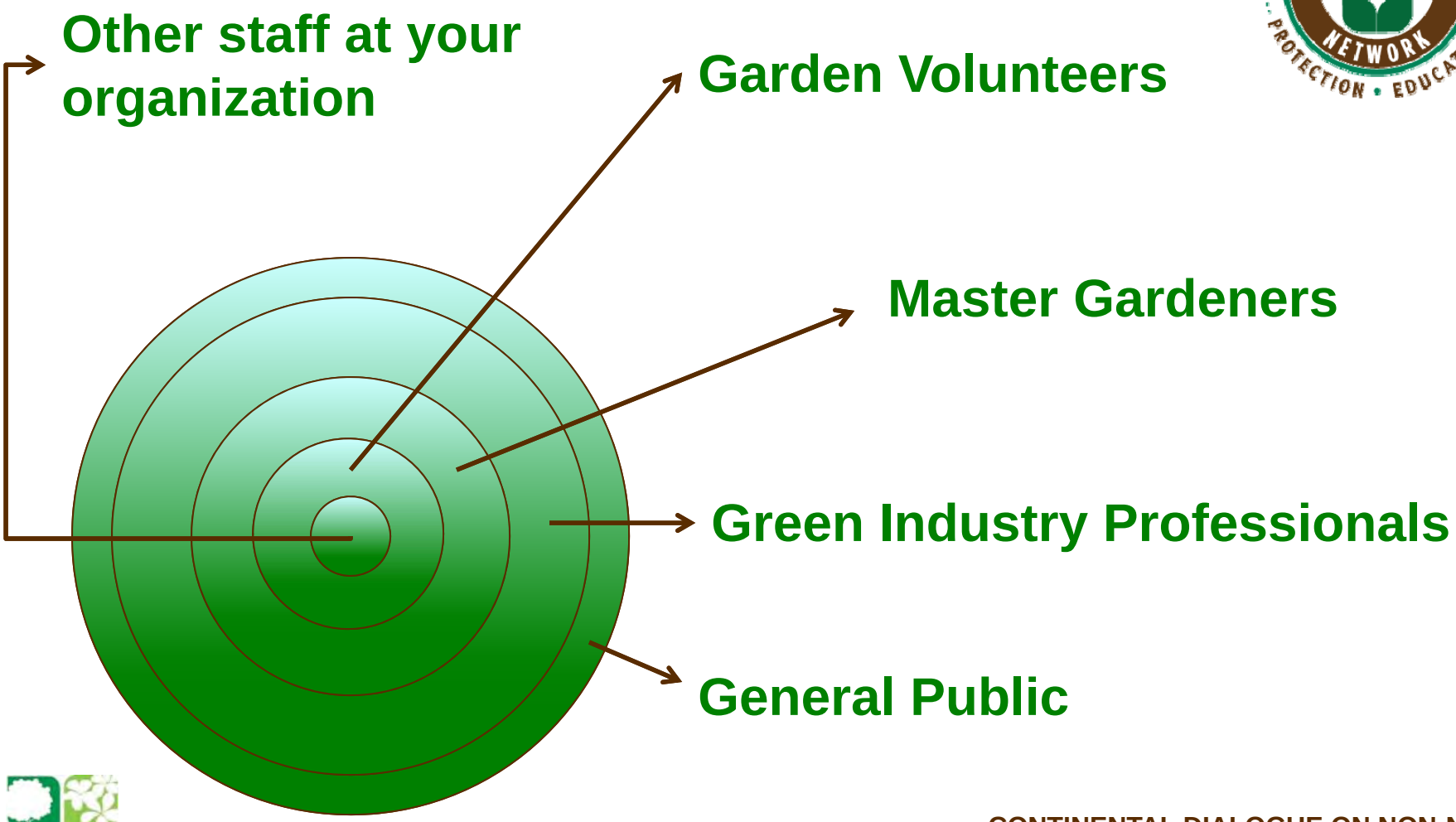

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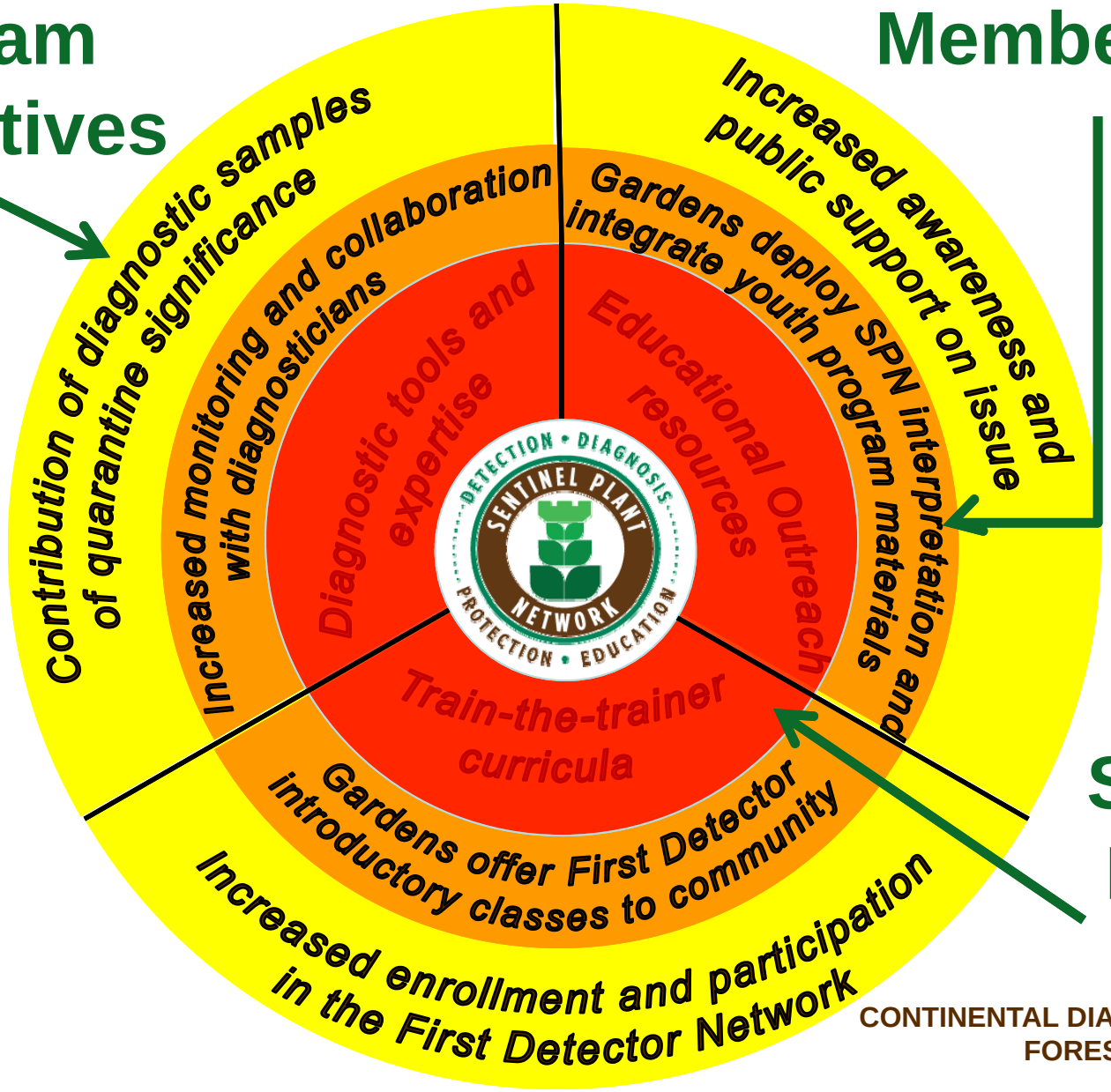

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Recruiting First Detectors

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First Detector (FD) Training Resources

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Roster Template for FD Trainings

Please download this form when planning your class so that you can try to collect the appropriate information from your registrants. Directions are provided on the template but if you have questions please contact Sentinel Plant Network Manager, Daniel Stern.

Train-the-Trainer Modules

Introduction to the SPN Module

Submitting Samples to the NPDN Module

Simplified Illustration of NPDN's Chain of Custody and Communication Protocols

NPDN First Detector Training Modules and Resources

Teaching Materials

SPN has developed impementation kits for member gardens to enhance FD training classes that they provide to their staff, volunteers, and community. Each unit in the implementation kit includes:

1 SPN hip pack
1 hand lens
1 specimen vial (plastic)
1 specimen bag (plastic)
1 SPN Brochure
1 NPDN Magnet
1 SPN Magnet
1 SPN lapel pin
1 region-specific pest/pathogen identification deck (see below)

LOGUE ON NON-NATIVE
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PLANT HEROES

About the Plant Heroes | Seedlings | Saplings | Trees | Field guide | Learn More | Parent Teacher Guide

Go, Plant Heroes!

Like 104

Take the Plant Hero Pledge and explore the site to learn more about the bad guys that threaten plants. Wanna do more? The first step in finding the bad guys is knowing where to look! Learn how to identify and then start mapping the host trees in your neighborhood!

WHY do plants need heroes?

WHO are the Plant Heroes?

HOW can you be a Plant Hero?

BAD GUYS!

Ask a Hero

Can the Asian Longhorned Beetle really cause an ecological emergency by wiping out trees in communities?

Frankie Knows >>

www.plantheroes.org

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Emerald-Ash-Borer-Bashing

Aponi Star

She may be the youngest of the crew, but is very wise and crafty with winged insects. She helps locate a nasty bug called the Emerald Ash Borer. To protect trees, Aponi can use a special wasp to kick out the unwelcome borer.

Asian-Longhorned-Beetle-Battling

FRANKIE BARKER

He is the fastest rope climber in his high school, and the first to be seen high above in the treetops. Frankie is passionate about protecting trees, especially from the nasty Asian Longhorned Beetle. Frankie is goin' after them!

Ramorum-Blight-Bravin'

Nate Green

It's funky and it's mean. When we need the facts, we count on Nate Green! He knows that oak trees and other plants are getting hassled by a wicked water mold. Destructive pathogens, you now have a reason to run!

Redbay-Ambrosia-Beetle-Bustin'

Laura Wilkins

As a freshman college student, Laura studies ecology and science. She is a born leader and fierce fighter. Don't let her smile fool you-she is after her dreaded enemy, the Redbay Ambrosia Beetle!

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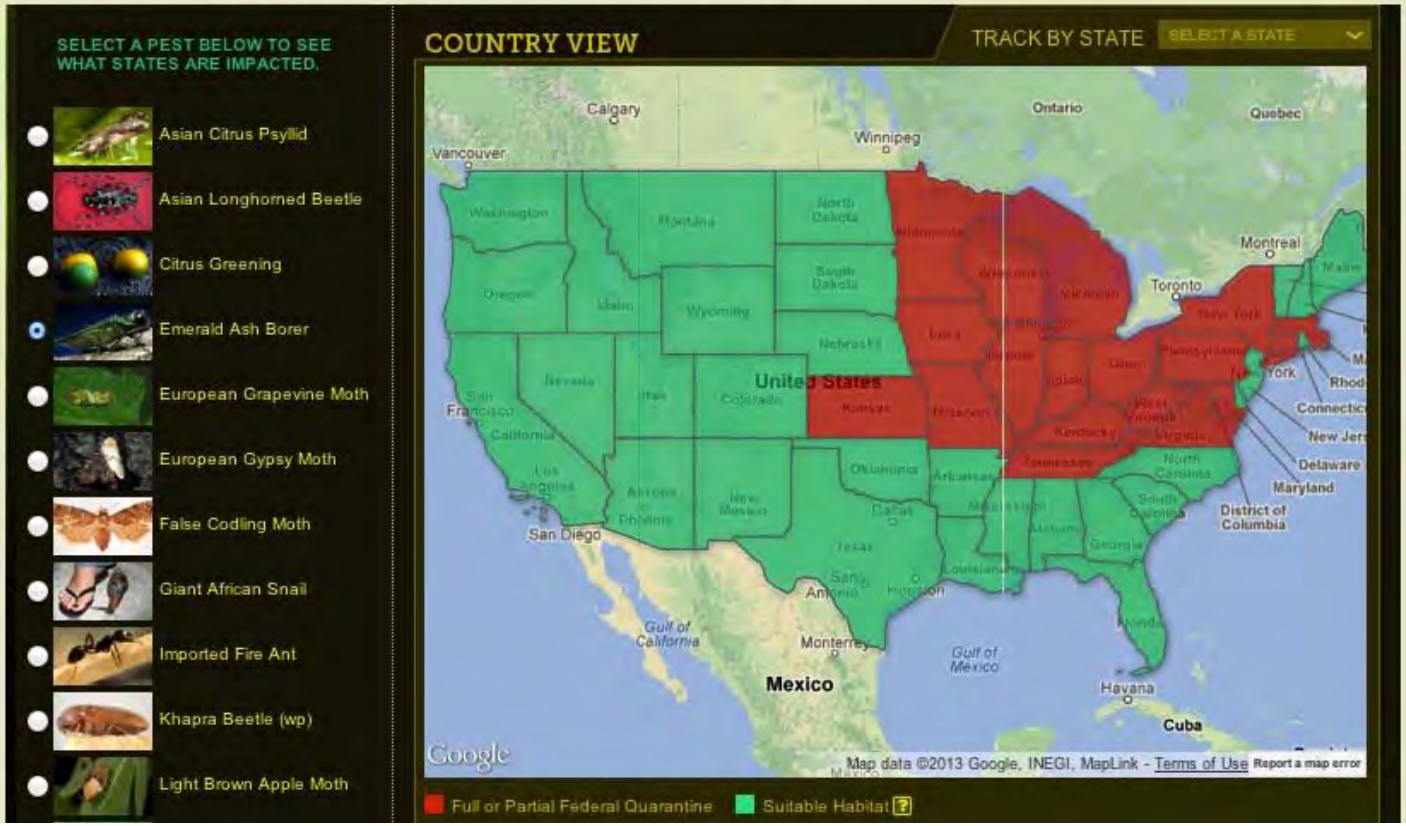
Interactive Tracking Map

Map courtesy of USDA - Animal and Plant Health Inspection Service's ***Hungry Pests*** campaign. The pests targeted by the Hungry Pests initiative are federally regulated invasive species whose introduction into the United States and spread within the country is assisted by the activities of the general public. These pests have the ability to cause significant harm to U.S. agricultural and environmental resources. Visit the ***Hungry Pests website*** to learn more about this campaign, find addtional outreach materials and learn how to leave Hungry Pests behind!



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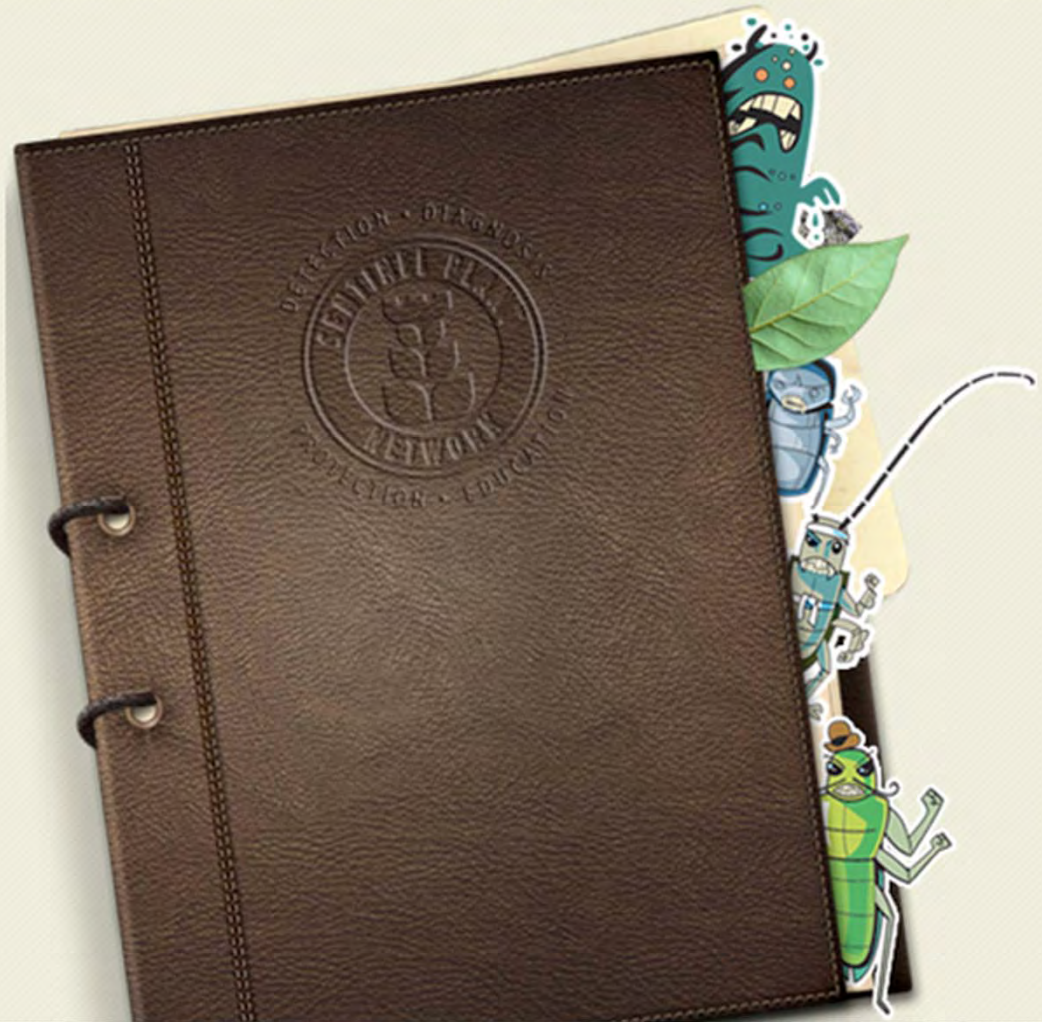
The Official Plant Heroes Field Guide



Asian Longhorned Beetle (Anoplophora glabripennis)

Redbay Ambrosia Beetle (Xyleborus glabratus)

Ramorum Blight or Sudden Oak Death (Phytophthora ramorum)

Emerald Ash Borer (Agrilus planipennis)

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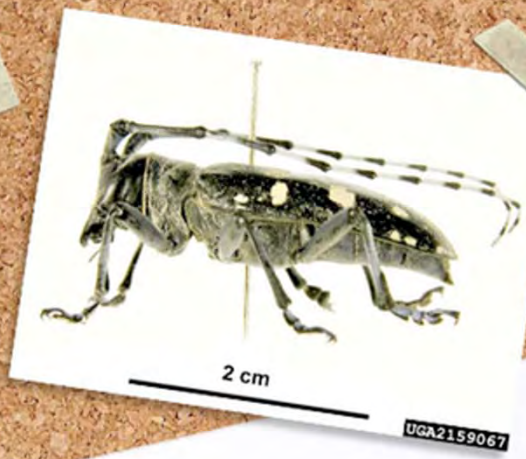
ASIAN LONGHORNED BEETLE

Identification

Top-view of the Asian Longhorned Beetle. >>



<< Side-view of the Asian Longhorned Beetle.

<< An adult Asian longhorned beetle can measure over one inch, has six legs, a black body with white spots, long & banded antennae, and sometimes has blue feet!

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ASIAN LONGHORNED BEETLE

Life Cycle

<< An Asian longhorned beetle larvae, which can measure over an inch long!

Close up of Asian Longhored Beetle larva in the wood of a host tree.

<< 4 stages of the Asian Longhorn Beetle life cycle. Top; left to right: Egg, Pupa, Adult Bottom: Larva