

Indiana Cooperative Agricultural Pest Survey

2014 Annual Report Nursery and Retail Plants Survey

1 January – 31 December



Department of Entomology at Purdue University
Indiana Department of Natural Resources (IDNR)
United State Department of Agriculture (USDA), Animal and Plant Health Inspection Service
(APHIS), Plant Protection and Quarantine (PPQ)

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INDIANA DEPARTMENT OF
NATURAL RESOURCES

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APHIS

CAPS 2014 Annual Report

Year:	2014
State:	INDIANA
Cooperative Agreement Name:	Indiana Agricultural Pest Surveys (CAPS) 2014
Cooperative Agreement Number:	14-8218-0332-CA
Project Funding Period:	1 January 2014 – 31 December 2014
Project Report:	CAPS Nursery & Retail Plants Survey
Project Document Date:	31 March 2015
Cooperators Project Coordinator:	Larry W. Bledsoe
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Quarterly Report	<input type="checkbox"/>
Semi-Annual Accomplishment Report	<input type="checkbox"/>
Annual Accomplishment Report	<input checked="" type="checkbox"/>

A. Compare actual accomplishments to objectives established as indicated in the work plan. When the output can be quantified, a computation of cost per unit is required when useful.

Objective 1. Utilize Cooperator and APHIS program funding, as outlined in the Financial Plan within the authorized parameters to conduct a nursery and retail plants survey to evaluate the Indiana annual commercial nursery industry for the incidence old world bollworm, *Helicoverpa armigera*, boxwood blight, *Cylindrocladium pseudonaviculata* and the organism responsible for sudden oak death, *Phytophthora ramorum*.

a. Nursery and retail plants survey:

Proposed data were 1,120 records.

Actual data were 1,026 records*.

Proposed and actual funding was \$17,330

Cost per unit was \$16.89.

*total includes boxwood cultivars observed and does not include boxwood count of stems evaluated (n=138,877). Partial data were lost when cultivar identity was accidentally pooled in 7 counties=21 sites.

a1. Survey Methodology (trapping protocol): This survey was integrated with the annual plant nursery and retail outlet inspections conducted by Indiana Department of Natural Resources. State nursery inspectors set and monitored traps for old world bollworm, *H. armigera*, sampled foliage of ornamental boxwood cultivars for boxwood blight, *C. pseudonaviculata*, and observed and sampled a wide range of susceptible perennial plant foliage for *P. ramorum* according to CAPS Approved Methods. Samples were sent to Purdue University Plant Pest & Disease Laboratory or to the Department of Entomology. For moth survey, traps were deployed and serviced at 45 nurseries and/or retail plant outlets. One plastic bucket (unitrap) trap with lure and kill strip was placed per site for old world bollworm, *H. armigera*, in May and serviced biweekly for 3 months. CAPS SSC prescreened suspect moths by micro dissection of male genitalia. Boxwood blight, *Calonectria pseudonaviculata*, was assessed visually by examining plants grown and/or sold by dealers and nurseries. Symptomatic tissue was sent to Purdue Plant Pest and Diagnostic Laboratory. Potential host plants of Sudden Oak Death disease were sampled in 38 counties from May through July. Indiana Department of Natural Resource personnel selected potentially symptomatic parts of *Camellia*, *Rhododendron*, *Viburnum*, and *Pieris* from Indiana nurseries and other landscape plant retail outlets and sent to Purdue Plant Pest Diagnostic Laboratory to test for the presence of *P. ramorum*. Samples were tested using an enzyme-linked immunosorbent assay (ELISA) consistent with the *Phytophthora ramorum* Nursery Survey Manual (Revised April 30, 2007) USDA-PPQ. Confirmation testing (PCR) of suspect *Phytophthora spp.* positive samples was performed by Michigan State University. Data are accessible through the NAPIS database.

a2.1. Old world bollworm survey locations and dates;

1. Boone Co. 5/15 - 8/11; 1 site
2. Clark Co. 5/2 - 7/25; 1 site
3. Dubois Co. 5/22 - 7/30; 2 sites
4. Floyd Co. 5/2 - 7/25; 2 sites
5. Hamilton Co. 5/15 - 8/11; 2 sites.
6. Hancock Co. 5/2 - 7/21; 1 site
7. Harrison Co. 5/2 - 7/25; 1 site
8. Hendricks Co. 5/29 - 8/22; 2 sites
9. LaPorte Co. 5/12 - 7/32; 2 sites
10. Madison Co. 5/15 - 8/11; 1 site
11. Marion Co. 5/29 - 8/22; 2 sites, 5/2 - 7/23; 2 sites
12. Marshall Co. 5/1 - 8/22; 2 sites
13. Monroe Co. 5/8 - 8/1; 6 sites
14. Porter Co. 5/12 - 7/31; 4 sites
15. Ripley Co. 5/8 - 7/22; 2 sites
16. Saint Joseph Co. 5/1 - 8/22; 3 sites
17. Steuben Co. 5/12 - 8/18; 5 sites
18. Vanderburgh 5/21 - 7/28; 2 sites
19. Warrick Co. 5/21 - 7/28; 1 site

a2.2. Boxwood blight survey locations and dates

1. Adams Co. 7/14; 1 site
2. Allen Co. 7/16; 1 site
3. Boone Co. 7/10; 1 site
4. Clark Co. 4/23 - 5/14; 8 sites
5. Clinton Co. 7/13; 1 site
6. Decatur Co. 7/30; 1 site
7. Delaware Co. 6/09; 1 site
8. Dubois Co. 5/15 - 5/28; 3 sites
9. Elkhart Co. 7/23; 1 site
10. Fountain Co. 7/25; 1 site
11. Floyd Co. 4/24 - 8/04; 3 sites
12. Gibson Co. 5/30; 1 site
13. Grant Co. 7/17; 1 site
14. Hamilton Co. 6/05 - 7/16; 6 sites
15. Howard Co. 7/21; 1 site
16. Jackson Co. 4/01 - 6/05; 4 sites
17. Jefferson Co. 4/25 - 5/13; 2 sites
18. Jennings Co. 6/06; 2 sites
19. Johnson Co. 5/01; 1 site
20. Knox Co. 6/23; 1 site
21. Kosciusko Co. 5/09; 1 site

22. Lake Co. 5/26; 1 site
23. Lawrence Co. 5/15; 3 sites
24. Madison Co. 4/29; 1 site
25. Monroe Co. 5/05 - 6/05; 6 sites
26. Marion Co. 4/29 - 7/21; 7 sites
27. Marshall Co. 7/02; 1 site
28. Perry Co. 5/21; 1 site
29. Porter Co. 5/29 - 6/06; 4 sites
30. St. Joseph Co 5/13 - 6/16; 2 sites
31. Scott Co. 4/23; 2 sites
32. Shelby Co. 4/30; 1 site
33. Steuben Co. 5/12; 1 site
34. Vanderburgh Co. 5/21 - 6/04; 3 sites
35. Vigo Co. 6/09; 1 site
36. Warren Co. 7/22; 1 site
37. Warrick Co. 6/18; 1 site
38. Wayne Co. 4/28 - 5/27; 2 sites

a2.3. Sudden oak death, *Phytophthora ramorum* survey locations and dates.

1. Allen Co. 6/19 ; 1 site
2. Bartholomew 5/28; 1 site
3. Boone Co. 5/28; 1 site
4. Dubois Co. 5/28; 1 site
5. Hamilton Co. 6/5 - 7/16; 4 sites.
6. Jackson Co. 5/13 ; 1 site
7. Jefferson Co. 5/13; 1 site
8. Lake Co. 7/7; 1 site
9. Marshall Co. 6/16; 1 site
10. Marion Co. 5/27 - 7/21; 4 sites
11. Monroe Co. 5/2; 1 site
12. Noble Co. 6/19; 1 site
13. Porter Co. 7/7; 1 site
14. St. Joseph Co. 6/16; 2 sites
15. Tippecanoe Co. 6/30; 1 site
16. Vanderburgh Co. 6/4; 1 site

a3. Benefits and Results of Survey:

No target species were recovered.

4a4. Database submissions:

Old world bollworm, *Helicoverpa armigera*

Date Range: 01-01-2014 thru 12-31-2014

Counties 19 Sites 45 Pos 0 Neg 308

Boxwood blight, *Calonectria pseudonaviculatum*

Date Range: 01-01-2014 thru 12-31-2014

Counties 38 Sites 80 Pos 0 Neg 525
(138,877 boxwood stems examined as 351 bunches and single plants; partial data were lost when cultivar identity was accidentally pooled in 7 counties=21 sites.)

Sudden Oak Death, *Phytophthora ramorum*;
Date Range: 01-01-2014 thru 12-31-2014
Counties 20 Sites 20 Pos 0 Neg 308

B. If appropriate, explain why objectives were not met.

All objectives for reporting period (1 January to 31 December) were met.

C. Where appropriate, explain any cost overruns or unobligated funds in excess of \$1,000.

All funds were expended with no cost overruns.

D. Supporting Documents (if applicable) none attached

**indicates information is required per 7 CFR 3016.40 and 7 CFR 3019.5*

Approved and signed by

Philip T. Marshall (Cooperator) Date: _____

Gary W. Simon (ADODR) Date: _____