

# Indiana Cooperative Agricultural Pest Survey

## 2015 Annual Report Soybean Commodity 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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**CAPS 2015 Annual Report**

<b>Year:</b>	2015
<b>State:</b>	INDIANA
<b>Cooperative Agreement Name:</b>	Indiana Agricultural Pest Surveys (CAPS) 2015
<b>Cooperative Agreement Number:</b>	15-8218-0332-CA
<b>Project Funding Period:</b>	1 January 2015 – 31 December 2015
<b>Project Report:</b>	CAPS Soybean Commodity Survey
<b>Project Document Date:</b>	30 March 2016
<b>Cooperators Project Coordinator:</b>	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 to conduct a soybean commodity survey, process trap samples, and deliver results to the NAPIS database. The Cooperator will conduct a program that is expected to provide information about the presence or absence of potentially damaging exotic pests including old world bollworm, *Helicoverpa armigera*, silver Y-moth, *Autographa gamma*, Egyptian cotton leafworm, *Spodoptera littoralis*, cotton cutworm, *Spodotera litura*, golden twin spot moth, *Chrysodeceixis chalcites*, summer fruit tortrix, *Adoxophyes orana*, bean platispid, *Megacopta cribaria*, and

a. Corn commodity survey:

Proposed and actual funding was \$4,713.

Proposed data were 1,830 records. Actual data were 2,016 records.

Actual cost per unit was \$2.34.

a1. Survey Methodology: Survey methods for moths were adapted from the CAPS Soybean Commodity Guidelines (25 July 20007). Five high-risk trap sites with concentrations of grain crops (field corn and soybean), vegetables (primarily tomato, sweet bell pepper, and sweet corn), were identified. Five universal bucket traps (green/yellow/white) with lures and kill strips were placed at five locations at each site for each of old world bollworm, *Helicoverpa armigera*, silver Y-moth, *Autographa gamma*, Egyptian cotton leafworm, *Spodoptera littoralis*, cotton cutworm, *Spodotera litura*, golden twin spot moth, *Chrysodeceixis chalcites*, and summer fruit tortrix, *Adoxophyes orana*,. Traps were set on 12-15 May and were serviced weekly through the end of the reporting period, 10 -14 August. Survey methods for bean plataspid were developed from Purdue University recommendations for soybean pest management < <https://extension.entm.purdue.edu/fieldcropsipm/soybean.php>> and 40 years experience in soybean entomological field research by the SSC.

a2. Moth survey locations and dates;

Trap period extended weekly mid May to mid August (14 sample dates).

1. La Porte Co. Pinney-Agricultural Center, Wanatah, IN, set 5/13.
2. Knox Co. Southwest-Purdue, Vincennes, IN, set 5/12.
3. Randolph Co. Davis-Purdue Agricultural Center, Farmland, IN, set 5/12,
4. Tippecanoe Co. Meigs-Purdue Horticultural Center, Lafayette, IN, set 5/13.
5. Whitely Co. Northeast-Purdue Agricultural Center, Columbia City, set 5/14.

a2. Continued: bean plataspid survey locations and sample dates

- |                        |                       |
|------------------------|-----------------------|
| 6. Clark Co. 8/20      | 12. Jennings Co. 8/21 |
| 7. Crawford Co. 8/20   | 13. Knox Co. 8/18     |
| 8. Dubois Co. 8/18     | 14. Lawrence Co. 8/21 |
| 9. Floyd Co. 8/20      | 15. Perry Co. 8/20    |
| 10. Harrison Co. 8/20  | 16. Posey Co. 8/18    |
| 11. Jefferson Co. 8/21 |                       |

a3. Benefits and Results of Survey:

No target species were recovered. As in previous years, several species of endemic noctuid moths responded to the specific pheromones resulting in large numbers of moths to screen by micro-dissection.

a4. Database submissions:

Old world bollworm, *Helicoverpa armigera*,  
 Date Range: 05-18-2015 thru 8-14-2015  
 Counties 5 Sites 5 Pos 0 Neg 325

Egyptian cottonworm, *Spodoptera littoralis*,  
 Date Range: 05-18-2015 thru 8-14-2015  
 Counties 5 Sites 5 Pos 0 Neg 325

Cotton cutworm, *Spodoptera litura*,  
 Date Range: 05-18-2015 thru 8-14-2015  
 Counties 5 Sites 5 Pos 0 Neg 325

Silver Y-moth *Autographa gamma*;  
 Date Range: 05-18-2015 thru 8-14-2015  
 Counties 5 Sites 5 Pos 0 Neg 325

Golden twin spot Moth, *Chrysodiexis chalcites*,  
 Date Range: 05-18-2015 thru 9-17-2015  
 Counties 5 Sites 5 Pos 0 Neg 127

Summer fruit tortrix, *Adoxophyes orana*,  
 Date Range: 05-18-2015 thru 9-17-2015  
 Counties 5 Sites 5 Pos 0 Neg 117

Brown Stripe Downy Mildew, *Sclerophthora rayssiae*,  
 Date Range: 05-18-2015 thru 9-17-2015  
 Counties 38 Sites 5 Pos 0 Neg 117

Bean plataspid, *Megacopta cibarica*,  
 Date Range: 08-18-2015 thru 8-21-2015  
 Counties 11 Sites 66 Pos 0 Neg 66

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

All objectives for reporting period (1 January to 31 December 2015) 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

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

Approved and signed by

\_\_\_\_\_ Date: \_\_\_\_\_  
Philip T. Marshall (Cooperator)

\_\_\_\_\_ Date: \_\_\_\_\_  
Gary W. Simon (ADODR)