

# **CAPS ANNUAL ACCOMPLISHMENT REPORT 2008**

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Wisconsin Department of Agriculture, Trade and Consumer Protection  
Adrian Barta, State Survey Coordinator

**State** Wisconsin  
**Year** 2008 Annual  
**Agency** Wisconsin Department of Agriculture, Trade and Consumer Protection

## **I. CORE LEVEL FUNDING ACTIVITIES**

### **A. State Survey Coordinator**

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### **B. Member name of National CAPS Committee:** Robert Dahl

### **C. Compare actual accomplishments to objectives established for the period**

Continued infrastructure development and support were key elements in the 2008 WI CAPS request, and greatly augmented the abilities of the State to assist with the goals of protecting our food supply and agricultural system. Funding for the laboratory Plant Pathologist position and supplies at the DATCP Plant Industry Laboratory were also critical components of the Core Work Plan. Daniel Gerhardt left the position, but we were glad to welcome Rachel Leisso on board.

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

All objectives were met.

### **E. Where appropriate, explain any cost overruns.\***

None.

### **F. State CAPS Committee narrative-meeting dates, attendees, agenda.**

The State CAPS Committee met on May 6, 2008. An agenda is attached.

### **G. NAPIS database submissions**

Data from all surveys was entered into NAPIS by the required dates, with the exception of colony collapse disorder. The status of the results of that survey are still under consideration by program staff, awaiting consultation with USDA personnel. A positive entry would constitute the first NAPIS entry for the U.S., but the diagnosis is non-definitive.

## II. SIREX NOCTILIO WOODWASP SURVEY

### A. Survey methodology (trapping protocol)

One hundred and ten Lindgren funnel traps baited with Sirex lure (70% alpha pinene + 30% beta pinene) were set in 20 eastern and northern counties of the state, including Ashland, Barron, Bayfield, Brown, Door, Douglas, Iron, Florence, Forest, Kenosha, Kewaunee, Manitowoc, Marinette, Milwaukee, Oconto, Oneida, Ozaukee, Racine, Sheboygan, and Vilas. Placement of traps began on June 12 and was complete by July 30. Individual traps were checked every 2-3 weeks through October 31 and the contents were examined for foreign woodwasps, longhorned beetles, and bark beetles.

### B. Rationale underlying survey methodology

Sirex woodwasp is known to occur in Michigan, New York, Pennsylvania, Vermont, and Ontario, Canada and is associated with ports of entry and foreign solid wood packing materials. The regions of Wisconsin closest to the known infestations and with substantial shipping received from Asia were trapped. Survey methodology was based upon the CAPS/APHIS *Sirex noctilio* trapping protocols dated 4/20/06.

### C. Survey dates

May 01 to December 31, 2008 (trapping was conducted from June 12 to October 31, 2008).

### D. Taxonomic services

Screening, identification and preservation was performed by Krista Hamilton of DATCP. Samples for additional identification were sent to Rick Hoebeke at Cornell University, since samples sent to PPQ identifiers are not identified but merely screened for a specific species, and voucher specimens are not returned, contrary to common scientific courtesy. A total of three woodwasp specimens were submitted for additional identification.

### E. Results of survey

The 2008 survey generated a total of 209 samples, including 91 native woodwasps. The natives collected were *Sirex edwardsii* (8 individuals), *Sirex nigricornis* (12), *Urocerus albicornis* (12), *Urocerus cressoni* (56), and *Sirex nitidus* (3). *Sirex noctilio* was not detected in Wisconsin in 2008.

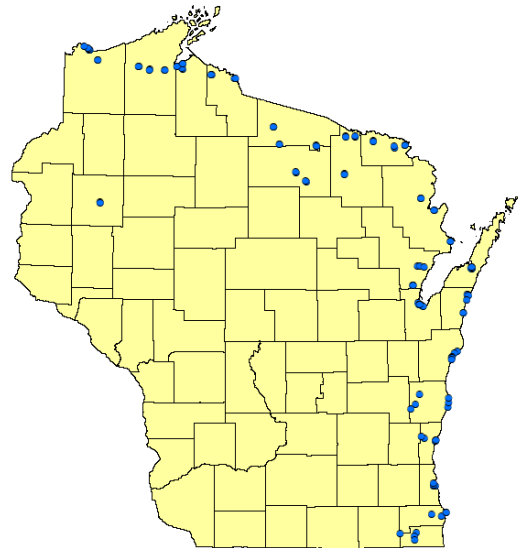
### F. Compare actual accomplishments to objectives established for the period.

The proposed Sirex trapping plan called for setting 108 traps and surveying 18 counties. Instead, a total of 110 traps were set in 20 counties, exceeding the projected trapping effort.

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

All survey objectives were met.

2008 Sirex Woodwasp Survey Sites



Wisconsin Department of Agriculture, Trade and Consumer Protection



**H. Where appropriate, explain any cost overruns\***

No cost overruns were incurred during this survey.

**III. EXOTIC WOOD-BORER/BARK BEETLE SURVEY**

**A. Survey methodology (trapping protocol)**

Sets of three Lindgren funnel traps baited with ultra-high release (UHR) ethanol lure only, alpha-pinene and UHR ethanol lures together, and a three-component exotic bark beetle lure were deployed at two sites in Sheboygan county. Two funnel traps baited with Sirex lure (70% alpha pinene + 30% beta pinene) were deployed at a Barron County lumber company site which receives red pine poles from *Sirex noctilio*-infested areas in New York State. Traps were placed in late April or early May, serviced at two-week intervals, and removed by late September.

**B. Rationale underlying survey methodology**

The survey conformed to protocols specified in the Exotic Wood Borer/Bark Beetle National Survey Field Manual, proposed by PPQ/EDP/EP Staff (03/10/2006). The list of survey sites was identified based on past USDA EAN history for SWPM violations, facilities receiving frequent shipments accompanied by dunnage or other SWPM, and importers receiving bulk cargo such as steel, marble, cast iron products, heavy machinery, and wooden spools. Trapping was limited to two high-risk locations, for efficiency.

**C. Survey Dates**

January 1 to December 31, 2008 (trapping was conducted from July 9 to October 1).

**D. Taxonomic services**

Samples were processed by the DATCP entomologist, Krista Hamilton. No suspects were submitted to the USDA APHIS PPQ identifier in Chicago, IL.

**E. Results of Survey**

Six traps (two sets of three traps) were set at a company in Kohler (Sheboygan County) and two were set at a pole and lumber company in Barron (Barron County). No exotic bark beetles or longhorned beetles were detected in Wisconsin in 2008.

**F. Compare actual accomplishments to objectives established for the period.**

The work plan indicated trapping would be based upon an interview to make an assessment of risk associated with ten locations or facilities, and the estimated number of sites would likely be four or five. Two facilities were trapped.

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

A lack of updated information regarding shipping, importing and EANS made contact with new potential trapping sites impossible; two high-risk sites from past years were selected for trapping.

**H. Where appropriate, explain any cost overruns\***

None.

### III. SOYBEAN PESTS SURVEY

#### A. Survey methodology (trapping protocol)

A detection survey was conducted for soybean rust and several other soybean pests including various soybean viruses (soybean dwarf virus, alfalfa mosaic virus), frogeye leaf spot (*Cercospora sojina*), white mold (*Sclerotinia sclerotiorum*), soybean aphid (*Aphis glycines*), bean leaf beetle (*Ceratoma trifurcata*), Japanese beetle (*Popillia japonica*), soybean pod borer (*Maruca vitrata*), and other diseases and pests which may be encountered in soybeans. Many fields were sampled during the R2 to R6 stages of growth to assess seasonal soybean aphid densities while treatment was still beneficial. In 238 fields, 40 leaves (new trifoliates and lower canopy) were collected for virus testing at the DATCP Plant Industry Lab, and an observation for soybean rust incidence was made. In 299 fields, insect prevalence and numbers were collected.

#### B. Rationale underlying survey methodology

Sampling fields at the R2-R4 stages of growth facilitates accurate comparison of survey results from year to year and indicates peak aphid levels during a given season. In addition, surveying for a broader range of soybean pests at each site (rust, viruses, soybean aphids, bean leaf beetle) increases the efficiency of the survey and allows for the collection of more field data. In 2008, unusual weather patterns led to two differences in surveying: the wet spring sparked an early-season survey (V2 and V3 stages) for root rots, and the cool weather during the heart of the growing season slowed expected aphid population growth, which led to extending insect observations into later reproductive-stage fields.

#### C. Survey dates

The field portion of survey was carried out from June 23 to August 29, 2008. Disease diagnostic work was performed by Plant Industry Laboratory personnel from June 23 to December 1, 2008.

#### D. Taxonomic services

DATCP Entomologist, Krista Hamilton (primary insect screening).

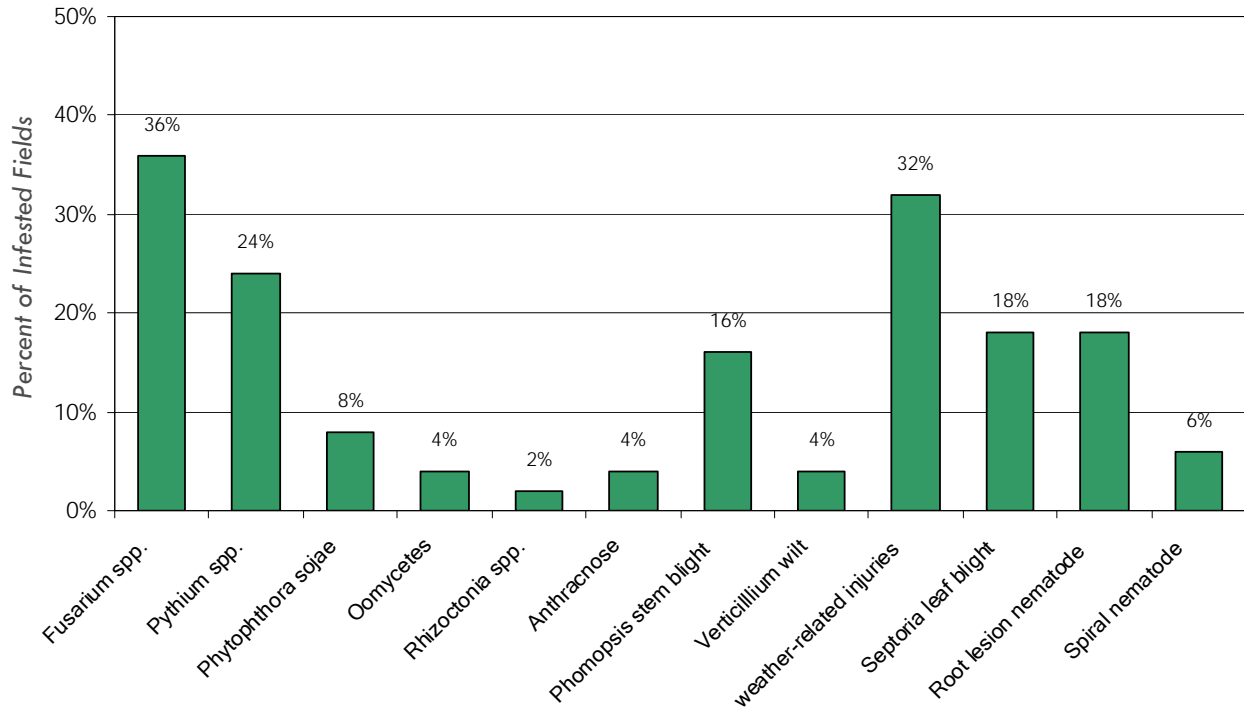
DATCP Plant Industry Lab, Anette Phibbs (primary disease screening).

Confirmation by USDA identifiers as appropriate.

#### E. Results of survey

In response to flooding and unusual weather conditions, a spring survey of 50 soybean fields in the V2 and V3 stages was conducted from June 23 to July 7, 2008. Fields were randomly selected, although surveyors targeted and collected whole plants that exhibited symptoms such as wilting, chlorosis and stem lesions. Samples were diagnosed at Plant Industry Laboratory for early season fungal pathogens and nematodes using culturing and microscopic examination (Figure 1). No new diseases were detected and *Phytophthora sojae* appeared to be less prevalent than expected.

*Soybean disease survey results, June 23-July 7, 2008. Fifty fields, V2-V3 growth stages.*



**Soybean viruses and rust**

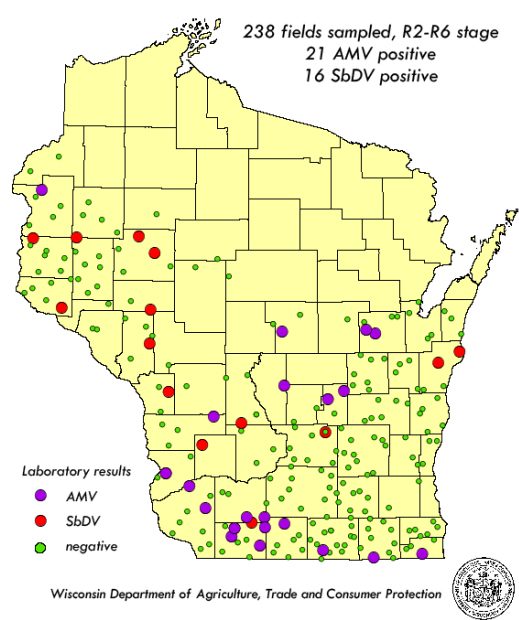
Virus symptoms were detected in 35 of 238 soybean fields sampled as part of the annual soybean rust and virus survey. Twenty-one fields were positive for Alfalfa Mosaic Virus (AMV), 16 fields were positive for Soybean Dwarf Virus (SbDV). Two fields were infected with both AMV and SbDV.

Testing for AMV and SbDV was performed using reverse transcription (RT) - polymerase chain reaction (PCR) (1, 2), which can detect lower levels of viral infections than DAS ELISA. No Asian soybean rust was detected in any of the 288 Wisconsin soybean fields surveyed for disease in 2008.

**Soybean aphid**

Examination of 299 soybean fields between July 22 and August 8, 2008 found non-economic soybean aphid populations at 92% of the survey sites (see map). High or economic populations were detected in only 8% of the sites. Moderate populations were detected in the central and north central districts, and low populations were found over much of the southeast, east central, northwest, and northeast districts. The 2008 statewide average number of soybean aphids per plant was 70. This compares to 164 aphids per plant in 2007, 69 aphids per plant in 2006, 118 aphids per plant in 2005, 11 aphids per plant in 2004, and 758 aphids per plant in 2003.

**2008 Soybean Virus Survey**



**F. Compare actual accomplishments to objectives established for the period.**

The survey plan proposed 300 sites. Combining the early season disease survey, the main disease survey and the insect survey, a total of 410 fields were surveyed.

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

Survey objectives were exceeded.

**H. Where appropriate, explain any cost overruns\***

None.

**IV. FRUIT TREE TORTRIX SURVEY**

**A. Survey methodology (trapping protocol)**

Pheromone traps for the FTT were distributed to the DATCP Apple Pest Trapping Network, made up of 35 selected orchard growers around the state. Thirty six traps and lures were placed by mid-May and checked each week for the presence of exotic fruit moths. Any moths captured in the traps were submitted to DATCP for identification.

**B. Rationale underlying survey methodology**

Using the established trapping network and cooperator labor allows coverage of the state in an efficient fashion. Growers are not required to make identifications, but simply forward trap catches. This survey relies on trained and experienced volunteers from around the state.

**C. Survey dates**

May 01 to September 01, 2008.

**D. Taxonomic services**

Screening was performed by Krista Hamilton of DATCP or Steve Krauth of the UW-Madison Insect Research Collection.

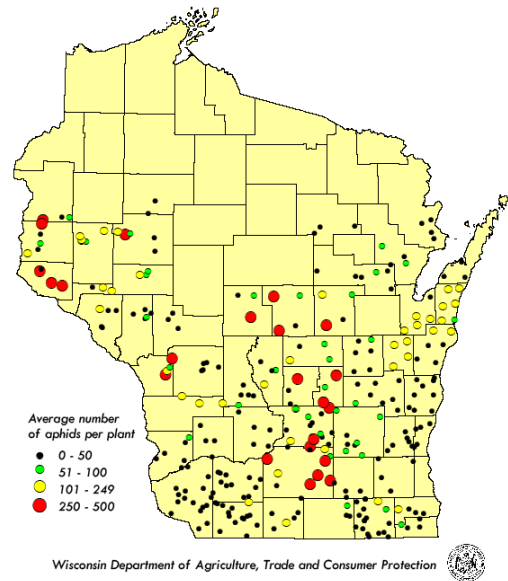
**E. Results of survey**

Survey results for the fruit tree tortrix, *Archips podana*, were negative.

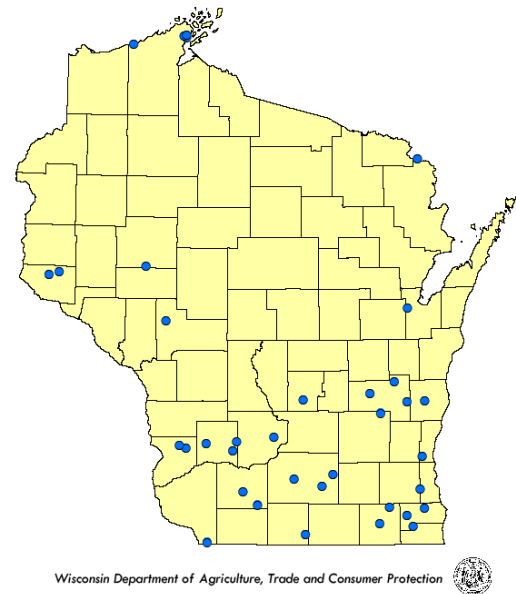
**F. Compare actual accomplishments to the objectives established for the period**

Pheromone traps were placed by May 2 or earlier. Thirty six traps were set in 35 orchards, compared to 34 traps projected in the 2008 work plan.

2008 Soybean Aphid Survey Results  
R2-R4 Growth Stages



2008 Fruit Tree Tortrix Moth Survey Sites



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

All of the objectives set for this survey were met.

**H. Where appropriate, explain any cost overruns\***

None.

**V. COLONY COLLAPSE DISORDER**

**A. Survey methodology**

During the annual spring and fall surveys of honey bee hives, a series of questions were asked to participating beekeepers, and hives were examined. Six hundred and eleven hives were examined for disorders, and 105 beekeepers participated in the spring survey, and 677 hives and 119 beekeepers were involved in the fall survey.

**B. Rationale underlying survey methodology**

No definitive diagnosis for colony collapse disorder is available. The combination of hive examination and owner questioning by a knowledgeable apiary inspector allows the elimination of common bee problems, leaving the non-definitive diagnosis of colony collapse as the most probable cause of colony loss.

Hives selected for inspection are primarily those of migratory beekeepers, moving to and from states such as Alabama, California, Florida, Georgia, Mississippi, and Texas. Colony collapse disorder has been reported as most pronounced among migratory operations.

**C. Survey dates**

April 14 to October 31, 2008.

**D. Taxonomic services**

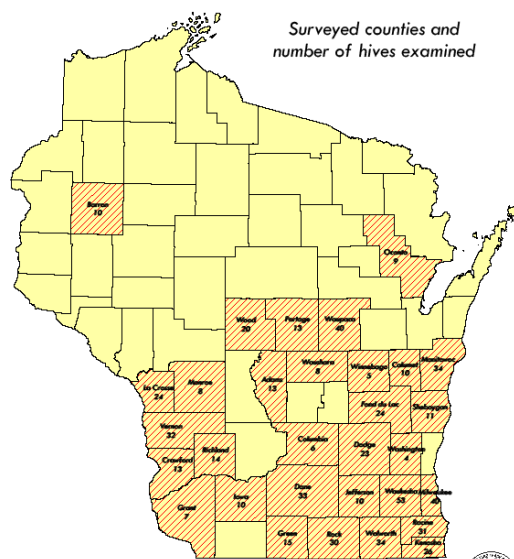
Liz Meils, State Apiarist (primary screening).

**E. Results of survey**

The combination of questioning and inspection led to the determination of symptoms consistent with colony collapse disorder in the hives of six beekeepers, with affected hives in the counties of Waupaca, Racine, Waukesha, Jefferson, Manitowoc and Calumet. A total of 35 hives had symptoms consistent with colony collapse disorder.

In addition, hives were inspected for a number of honeybee pests and diseases, including American Foulbrood (AFB), European Foulbrood (EFB), chalkbrood, sacbrood and small hive beetle. American Foulbrood was found in 3.8% of hives, EFB was found in 1.1%, chalkbrood was found in 9.5%, and sacbrood was found in 5% of hives. Small hive beetle was found in seven hives total, 1%.

2008 Colony Collapse Disorder Survey



Wisconsin Department of Agriculture, Trade and Consumer Protection



**F. Compare actual accomplishments to objectives established for the period**

The work plan offered targets of inspecting 900 hives and surveying 152 beekeepers. The survey accomplished 1,288 hive inspections and queried 224 beekeepers.

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

Objectives were exceeded.

**H. Where appropriate, explain any cost overruns\***

None.

**SIGNATURES**

_____ date _____	_____ date _____
Adrian Barta, SSC WI DATCP	JoAnn Cruse, SPHD USDA/APHIS