CAPS ANNUAL ACCOMPLISHMENT REPORT 2009

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

State	Wisconsin
Year	2009 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 2009 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. Rachel Leisso left the PIB Laboratory in 2009; hiring for her replacement is projected for early 2010.

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 13, 2009. An agenda and minutes are attached. For the first time, the Wisconsin CAPS Committee met in conjunction with the PPQ-moderated State Plant Pest Risk Committee, which brought together a diverse group of participants. Also for the first time, the Analytical Hierarchy Process was used to rank the WI CAPS Pest List.

G. NAPIS database submissions

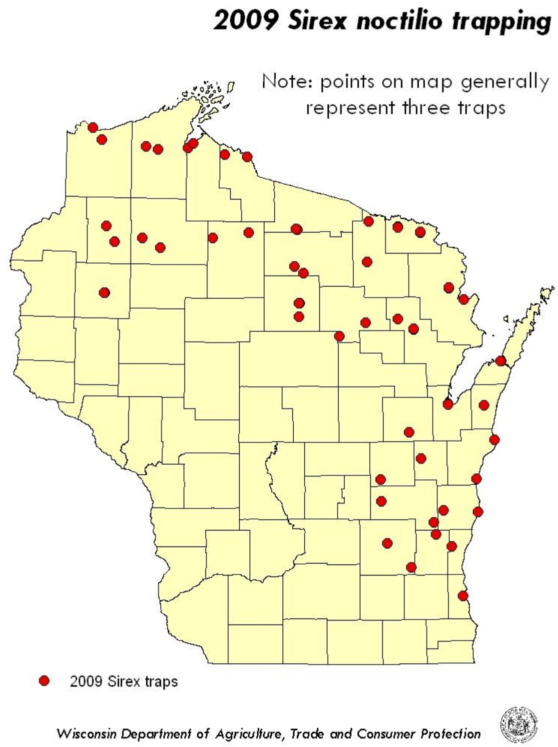
Most data from the surveys were entered into NAPIS by the required dates, with the exception of the Sirex noctilio data, some soybean virus data, and colony collapse disorder.

The Sirex data and the soybean virus data were delayed by sample processing and identification delays. The status of the results of the colony collapse disorder 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. With the exception of CCD, data entry is complete as of the date of this report.

II. SIREX NOCTILIO WOODWASP SURVEY

A. Survey methodology (trapping protocol)

One hundred and forty-three Lindgren funnel traps baited with Sirex lure (70% alpha pinene + 30% beta pinene) were set in 29 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 22 and was complete by July 30. Individual traps were checked every 2-3 weeks through November 17 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 22 to Nov 17, 2009).

D. Taxonomic services

Screening, identification and preservation was performed by Krista Hamilton of DATCP. All samples were native Siricids.

E. Results of survey

Sirex noctilio was not detected in Wisconsin in 2008. Native Siricids identified include

Sirex edwardsii	7
Sirex nigricornis	13
Urocerus albicornis	2

Urocerus cressoni	42
Xeris spectrum	1

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

The proposed Sirex trapping plan called for setting 100 traps and surveying 12 counties. Instead, a total of 143 traps were set in 29 counties, exceeding the projected trapping effort.

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

All survey objectives were met.

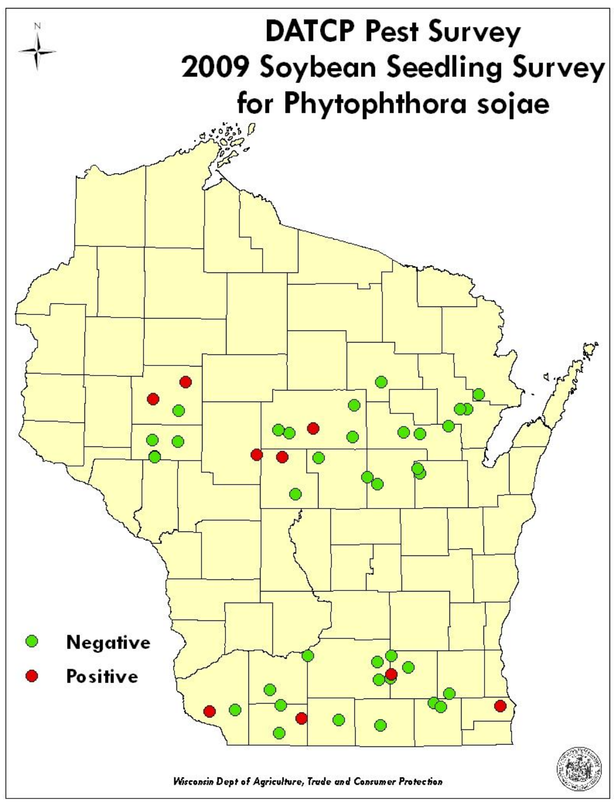
H. Where appropriate, explain any cost overruns*

No cost overruns were incurred during this survey.

III. SOYBEAN PESTS SURVEY

A. Survey methodology (trapping protocol)

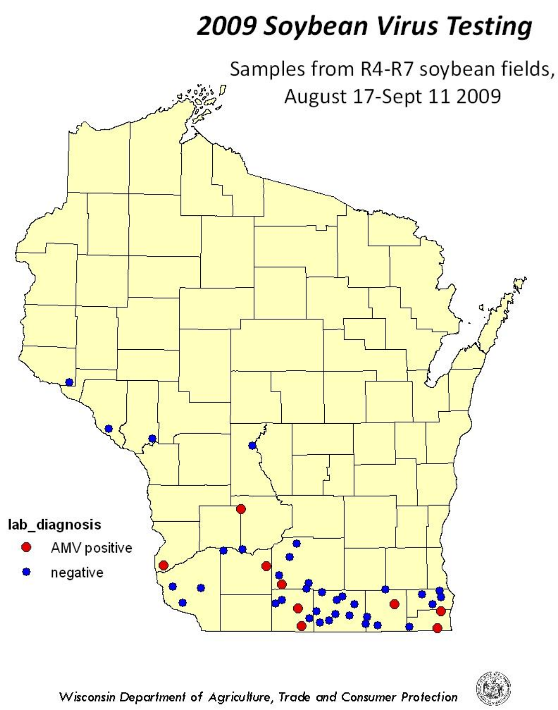
Under the banner of commodity survey, a pool of randomly-selected fields were sampled for multiple pests. An early-season survey for Phytophthora seedling root rots sampled a subset of the larger commodity target fields; this survey was aimed at early-vegetative stage fields. Due to cool weather, this survey was conducted from July 6- July 17.



A broader 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 47 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 247 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. The cool weather during the2009 growing season slowed expected aphid population growth, which led to extending insect observations into later reproductive-stage fields. Previous experience in virus testing also indicates that testing later in the season yields greater virus information, as virus titers are more likely to reach detectable levels. For this reason, virus sampling was conducted later than in previous years.



C. Survey dates

The field portion of the insect 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

A spring survey of 50 soybean fields in theV2-V6 stages, fields selected randomly from the 300 target soybean commodity fields, was conducted from August 17 to Sept. 3, 2009. 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 Phytophthora root rot using polymerase chain reaction (PCR). No new diseases were detected and *Phytophthora sojae* was identified in nine of 47 fields assayed.

Soybean viruses and rust

Viruses were detected in 9 of 47 soybean fields sampled as part of the annual soybean rust and virus survey, all positive for Alfalfa Mosaic Virus (AMV).

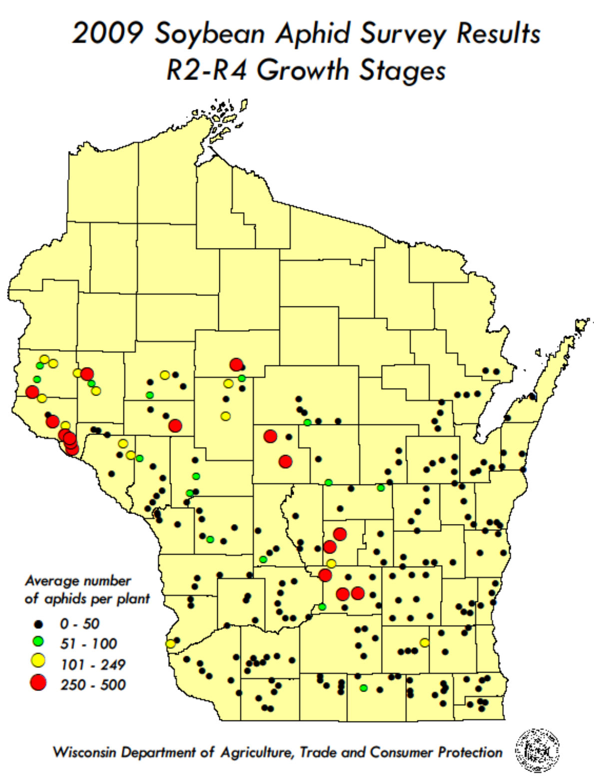
Soybean virus survey results, 2002-2009

Year	Total No. of Fields Surveyed	AMV	BPMV	CMV	Potyvirus group	SbDV
2002	177	NA	29.9%	NA	NA	NA
2003	286	NA	4.2%	0.3%	0.3%	1.7%
2004	293	1.0%	0.0%	0.0%	0.0%	1.7%
2005	276	NA	0.0%	NA	0.0%	1.4%
2006	188	NA	0.0%	NA	0.0%	3.2%
2007	227	2.2%	0.4%	0.0%	0.4%	3.1%
2008	238	8.8%	NA	NA	NA	6.7%
2009	47	19.1%	NA	NA	NA	pending

Testing for AMV 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 304 Wisconsin soybean fields surveyed under the CAPS commodity survey in 2008. Testing for soybean dwarf virus has been delayed by staffing constraints in the laboratory.

Soybean aphid

Examination of 247 soybean fields between July 22 and August 8, 2008 found non-economic soybean aphid populations at 94% of the survey sites (see map). High or economic populations were detected in only 8% of the sites. The 2009 statewide average number of soybean aphids per plant was 51. This compares to 72 in 2008, 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.



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 354 fields were surveyed.

G. If appropriate, explain why objectives were not

met*
Staffing shortages have delayed testing for one virus (soybean dwarf virus).

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. One thousand, three hundred and thirty-five hives were examined for disorders, and 217 beekeepers participated in the 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
May 4 to October 29, 2009.

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 one beekeeper, with affected hives in the county of Lafayette. A total of seven 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 4.9% of hives, EFB was found in 0.5%, chalkbrood was found in 4.7%, and sacbrood was found in 1.7% of hives. Small hive beetle was found in 16 hives total, 1.2%.

F. Compare actual accomplishments to objectives established for the period

The work plan based sampling upon the number of hives moved to Wisconsin. The number of hives sampled (1,335) is an increase from the 2008 sampling of 1,288 hives. The number of beekeepers surveyed, 217, was down from the 2008 number of 224.

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	JoAnn Cruse, SPHD
WI DATCP	USDA/APHIS