



State of Wisconsin
Governor Scott Walker

Department of Agriculture, Trade and Consumer Protection
Ben Brancel, Secretary

CAPS ANNUAL ACCOMPLISHMENT REPORT 2011

State Wisconsin
Year 2011 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:

C. Compare actual accomplishments to objectives established for the period

Continued infrastructure development and support were key elements in the 2011 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 Bureau Laboratory were critical components of the Core Work Plan. Thanks in part to this support, in 2011 the Plant Industry Bureau Laboratory detected *Phytophthora sansomeana* on Wisconsin Christmas trees for the first time, as well as isolating a little-known, as-yet-undescribed *Phytophthora* species (*Phytophthora* sp. *kelmania*), and isolated the causal agent of Cephalosporium stripe of wheat, *Cephalosporium gramineum*, from a Wisconsin wheat field for the first official confirmation of that disease in the state.

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 as the core constituency (SPHD, JoAnn Cruse; SPRO, Bob Dahl; PSS, Art Wagner and SSC, Adrian Barta) on Wednesday, March 23, 2011. This group has struggled with finding a suitable purpose and makeup of the State CAPS committee for several years. Previous iterations of the group have identified potential threats to Wisconsin agriculture, based upon the specialties and varied expertise of the invitees, but seldom have

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survey targets been selected based upon those concerns, survey targeting being a comprise of risk assessment of specific pests and practical use of available resources.

The core CAPS committee discussed this concern at length, without clear resolution. The group also discussed the value of generating a state pest list to use for guidance in targeting surveys. This discussion led to consideration of the proposed CAPS surveys for 2012, and how those targeted pests or commodities fit with perceived pest risks. The meeting concluded with a discussion of the relationship of the CAPS program with other pest detection programs among the various agencies active in the state.

G. NAPIS database submissions

Survey data were entered into NAPIS by the required dates, with the exception of the *Sirex* data. Data entry for that target species was delayed into January 2012 for identification of a suspect sample; the sample proved to not be *Sirex noctilio*, and all data has been entered into NAPIS.

II. SIREX NOCTILIO WOODWASP SURVEY

A. Survey methodology (trapping protocol)

One hundred and twenty-four Lindgren funnel traps baited with *Sirex* lure (70% alpha pinene + 30% beta pinene) were set in 32 eastern and northern counties of the state, including Ashland, Barron, Bayfield, Brown, Burnett, Calumet, Door, Douglas, Florence, Fond du Lac, Forest, Iron, Kewaunee, Langlade, Lincoln, Manitowoc, Marinette, Milwaukee, Oconto, Oneida, Ozaukee, Polk, Price, Rusk, Sawyer, Sheboygan, Taylor, Vilas, Washburn, Washington and Winnebago. Traps were placed in pine stands. Placement of traps began June 16 and was complete by July 6, 2011. Individual traps were checked every 2-3 weeks through November 1 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, 2011 (trapping was conducted from June 16 to Nov 1, 2011).

D. Taxonomic services

Screening, identification and preservation was performed by Krista Hamilton of DATCP.

E. Results of survey

Sirex noctilio was not detected in Wisconsin in 2011. Several species of native Siricidae were captured during the survey, including *Urocerus cressoni* (15 specimens in nine counties), *Sirex nigricornis* (two specimens in two counties), *Sirex cyaneus* (two specimens, one county), and *Sirex edwardsii* (two specimens, two counties).

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

The proposed *Sirex* trapping plan called for setting 76 traps and surveying 12 counties. Instead, a total of 134 traps were set in 32 counties, exceeding the projected trapping effort.

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

All survey objectives were met.

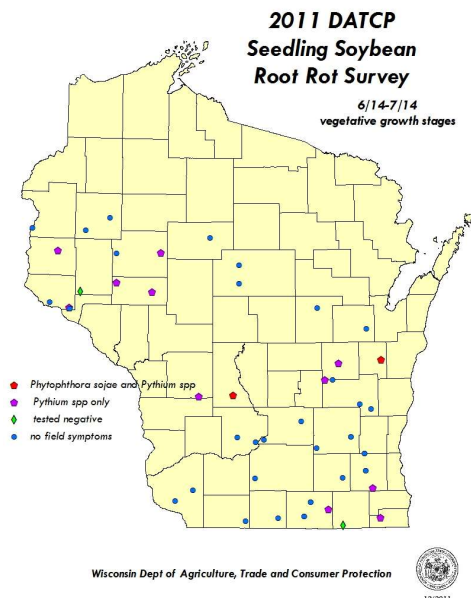
H. Where appropriate, explain any cost overruns*

No cost overruns were incurred during this survey.

III. SOYBEAN COMMODITY SURVEY

A. Survey methodology (trapping protocol)

Under the banner of commodity survey, a pool of randomly-selected fields was sampled for multiple pests. An early-season survey for *Phytophthora* seedling root rots sampled a subset of the larger pool of target fields tested for virus and observed for rust.



Following the seedling sampling, a broad 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. To assess insect levels, 142 fields were sampled during the R4 to R6 stages of growth to assess seasonal soybean aphid densities while treatment was still beneficial.

Fields for disease sampling were chosen using Visual Sample Plan statistical software (as outlined in the Soybean Commodity Guide) and Arc Map. Sample

numbers were based on relative soybean acreage by county, with a desired actual sample size of 230 fields visited. In each field, plant pathologists stopped at 4 sites and took 2 leaflets from five plants in the R4 to R6 life stage. The leaves were kept on ice until delivered to Plant Industry Laboratory for testing. Foliage was tested using a molecular method, reverse transcription (RT) - polymerase chain reaction (PCR)

Fields for aphid testing were chosen based upon historical survey sites, again distributed by relative soybean acreage per county. In each selected field, in addition to observations for the target pests listed above, five plants at each of four locations were pulled, and the number of soybean aphids counted.

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. For the virus/rust survey, a later stage of maturity was selected to increase the probability of detectable virus titer. For the virus survey, the target number of fields allows for 90% confidence of detection with a 1% detection threshold.

C. Survey dates

The field portion of the main survey was carried out from June 14 to August 23, 2011. Disease diagnostic work was performed by Plant Industry Laboratory personnel from June 23 to December 21, 2011.

D. Taxonomic services

DATCP Entomologist, Krista Hamilton (primary insect screening).

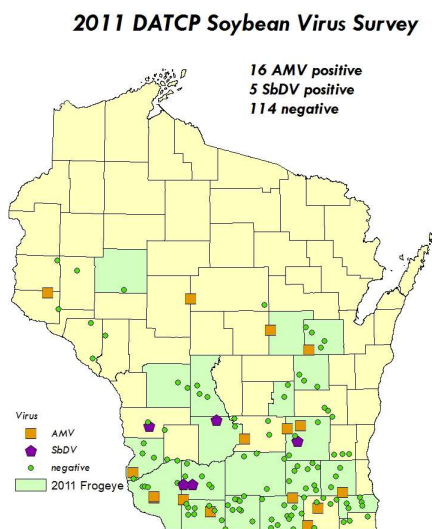
DATCP Plant Industry Lab, Anette Phibbs (primary disease screening).

Confirmation by USDA identifiers as appropriate.

E. Results of survey

A spring survey of 50 soybean fields in the V2-V6 stages, fields selected randomly from the 300 target soybean commodity fields, was conducted from June 14 to July 14, 2011. Symptomatic plants were found at only at only 15 of the 50 fields observed.

Samples were diagnosed at Plant Industry Laboratory for early season *Phytophthora* root rot using polymerase chain reaction (PCR). *Phytophthora sojae* was detected in only two of the 15 samples, and no *P. sansomeana* was detected; further investigation of the symptomatic samples yielded three species of *Pythium*. Further work with both oomycete genera will be conducted in coming years.

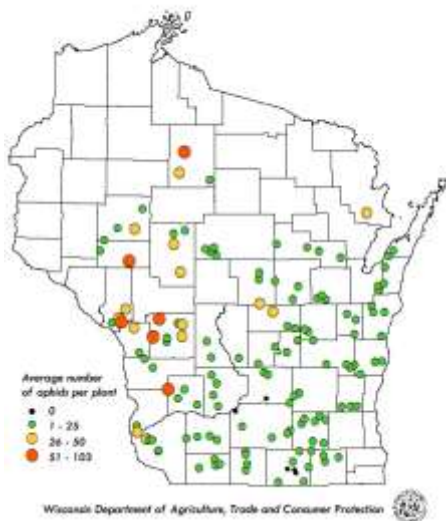


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For the main disease component of the survey, samples were collected in 135 fields. Alfalfa mosaic virus was detected in samples from 16 fields (12%); soybean dwarf mosaic virus was detected in samples from 5 fields (4%). The level of AMV detected remained approximately steady (13% in 2010 vs 12% in 2011), while the level of SbdDV detected fell from roughly 8% to 4%, perhaps reflecting the low level of aphid infestation in the state in 2011.

A significant find, though not of CAPS concern, was the level of frogeye leaf spot, caused by *Cercospora sojina*. The first DATCP record of *C. sojina* in Wisconsin was in 2000, and the disease occurred only sporadically until 2010; in 2011, symptoms of frogeye were detected in 40 fields across 19 counties.

Soybean Aphid Survey Results August 2011



Examination of 142 soybean fields (each visited twice) between July 19 and August 22, 2011 found no soybean aphid populations above the established economic threshold of 200 aphids per plant. In fact, the statewide average of 12 aphids per plant was the second-lowest average since the detection of the pest in 2000.

No Asian soybean rust was detected in any of the 469 Wisconsin soybean field visits made under the CAPS commodity survey in 2011.

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 425 fields were surveyed.

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

Objectives were exceeded.

H. Where appropriate, explain any cost overruns*

None.

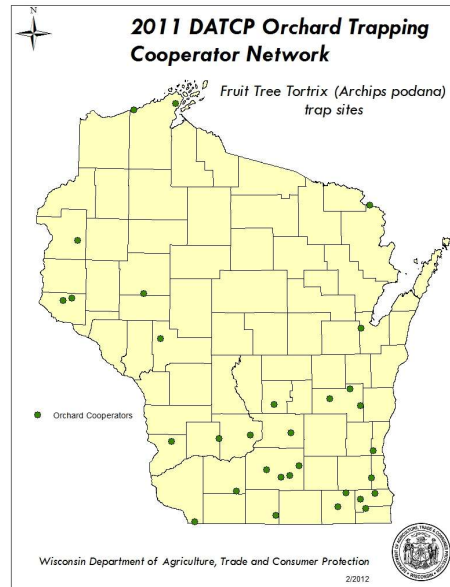
V. Fruit Tree Tortrix

A. Survey methodology

Thirty-two cooperating orchards around the state set Pherocon VI traps, baited with Trece FTT lure for the Fruit Tree Tortrix, *Archips podana*. Trapping began on June 1 and continued until September 1, 2011.

B. Rationale underlying survey methodology

The DATCP apple insect trapping network is a well-established group of cooperating apple growers who share trap counts with DATCP for publication in the WI Pest Bulletin. The network traps for a range of endemic and established pests, as well as setting traps for a rotating series of exotics pests, including past trapping effort for apple ermine moth. Cooperators set and monitor traps, with the understanding that any insect caught in the FTT trap will be submitted to DATCP for identification. This approach allows DATCP to deploy traps throughout the apple-growing regions of the state, and have them checked regularly, without having to make the prohibitive travel that such a distribution would require.



C. Survey dates

June 1 -Sept 1, 2011.

D. Taxonomic services

Screening, identification and preservation were performed by Krista Hamilton of DATCP.

E. Results of survey

No *Archips podana* were trapped.

F. Compare actual accomplishments to objectives established for the period

The workplan called for traps to be set at 34 sites, the number of participating orchards at the time of workplan development. The actual number of participating orchards by the Spring of 2011 had dropped to 33; all 33 orchards remaining in the trapping network participated in this detection survey.

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

One orchard left the cooperator trapping network.

H. Where appropriate, explain any cost overruns*

None.

SIGNATURES

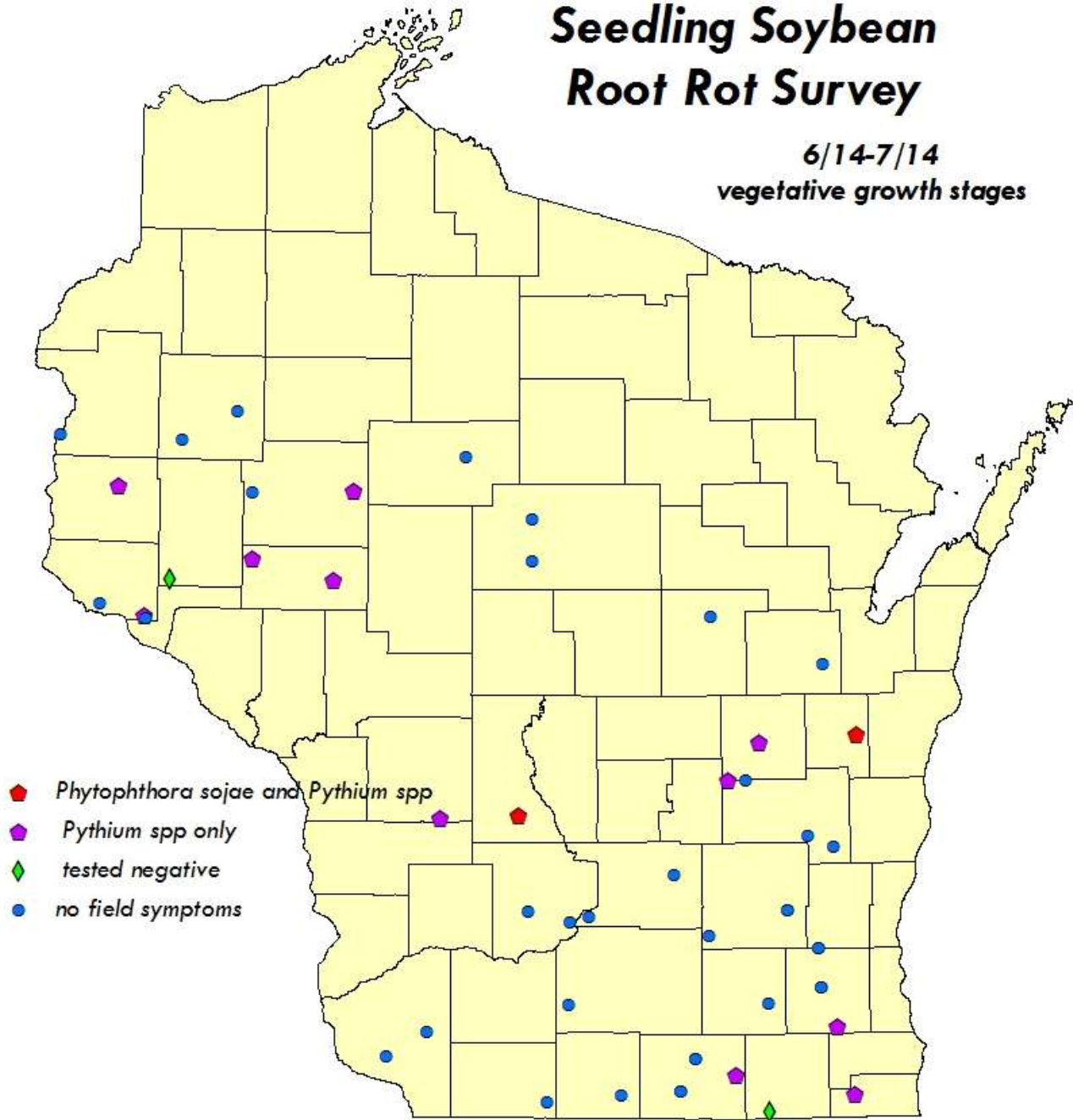
_____ date _____
 Adrian Barta, SSC
 WI DATCP

_____ date _____
 JoAnn Cruse, SPHD
 USDA/APHIS

Appendix A: Full size maps

2011 DATCP Seedling Soybean Root Rot Survey

6/14-7/14
vegetative growth stages



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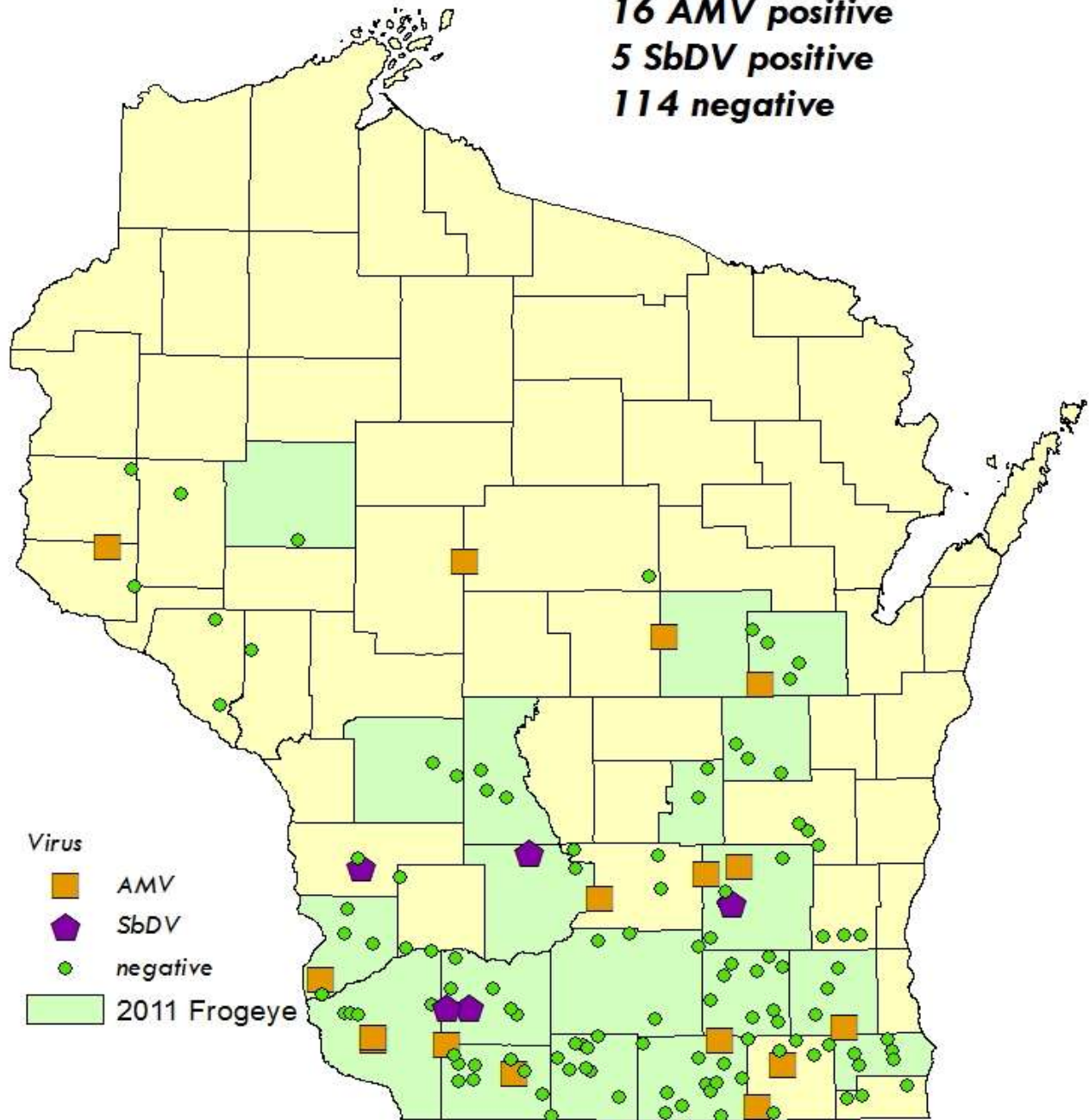
12/2011



2011 DATCP *Sirex noctilio* trapping

2011 DATCP Soybean Virus Survey

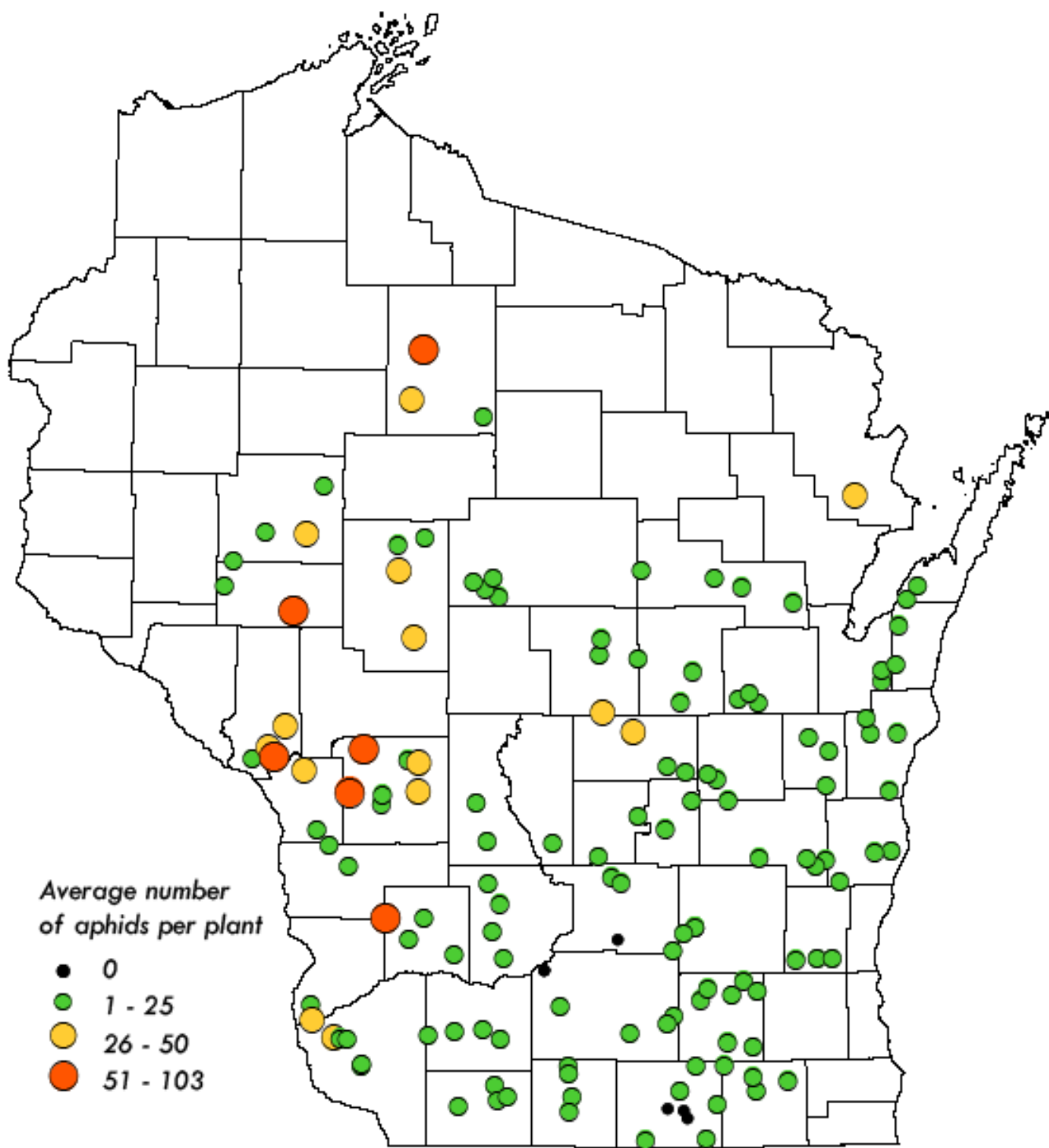
16 AMV positive
5 SbDV positive
114 negative



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Soybean Aphid Survey Results August 2011

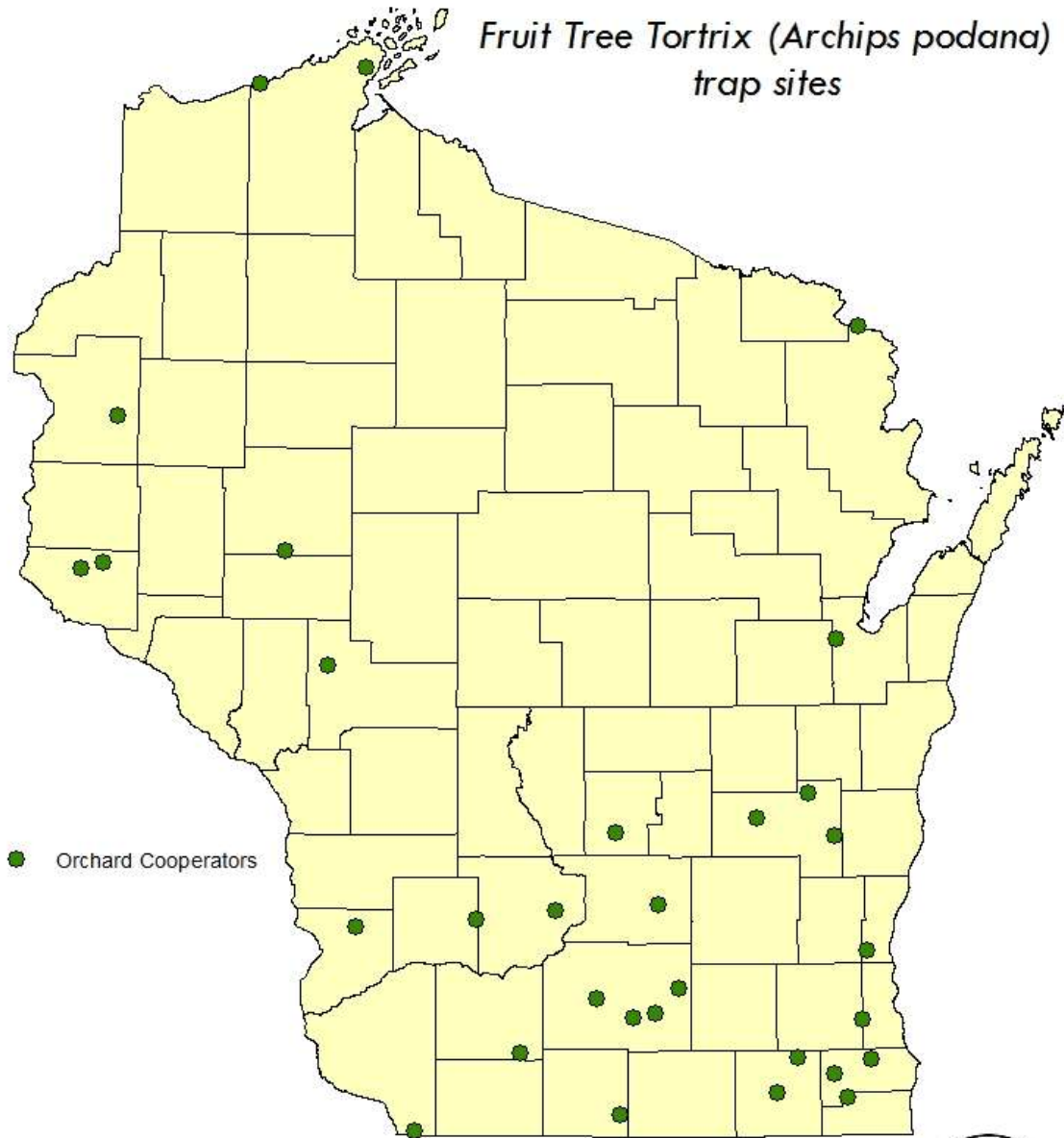


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2011 DATCP Orchard Trapping Cooperator Network



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