2015 WISCONSIN CROP DISEASE SURVEY

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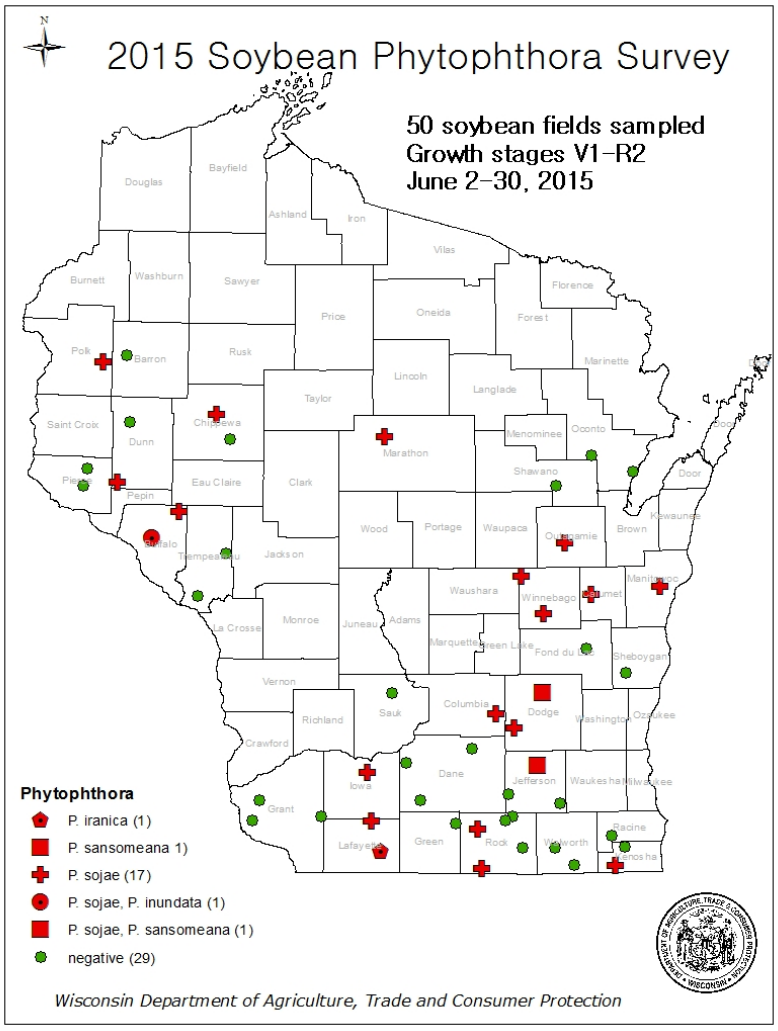
http://pestsurvey.wi.gov/

The 2015 survey of early-vegetative soybeans found 38% (19 of 50) surveyed fields tested positive for **Phytophthora root rot** disease caused by *Phytophthora sojae*. That is a lower infection level than last year's 49%, but still very high. The state-wide survey took place from June 2 to 30. The fungus-like pathogen was detected in 16 counties: Buffalo, Calumet, Chippewa, Columbia, Dodge, Dunn, Iowa, Kenosha, Lafayette, Manitowoc, Outagamie, Polk, Rock, and Winnebago. Based on previous year's survey results, all other counties should not expect to be free from the disease.

Besides the well-known cause of seedling root rot *Phytophthora sojae*, DNA based testing also determined Phytophthora species that are new to Wisconsin soybean productions areas.



P. sansomeana was identified in soybean roots in Jefferson and Dodge Cos. Since 2012 this survey has documented *P. sansomeana* in 10 Wisconsin counties (Calumet, Dane, Dodge, Dunn, Eau Claire, Green, Jefferson, Outagamie, Marathon and Sheboygan). This pathogen has been detected on other hosts in Wisconsin besides soybeans such as corn, balsam and Fraser fir.

Two additional species, ***P. inundata*** and ***P. iranica,*** were found in 2015. *P. inundata* was detected in Buffalo Co., in a field that was also infected with *P. sojae*. *P. iranica* was found in Lafayette Co. It is not known at this time if these new species can cause disease on soybeans.

P. inundata was first described in 2003 in wet or flooded soils in Europe and South America. It is associated with root and collar rots of hardwood trees and shrubs (horse chestnut, olive, willow and grape). The known hosts of *P. iranica*, first found in Iran in 1971, include eggplant, potato, tomato and sugar beet.

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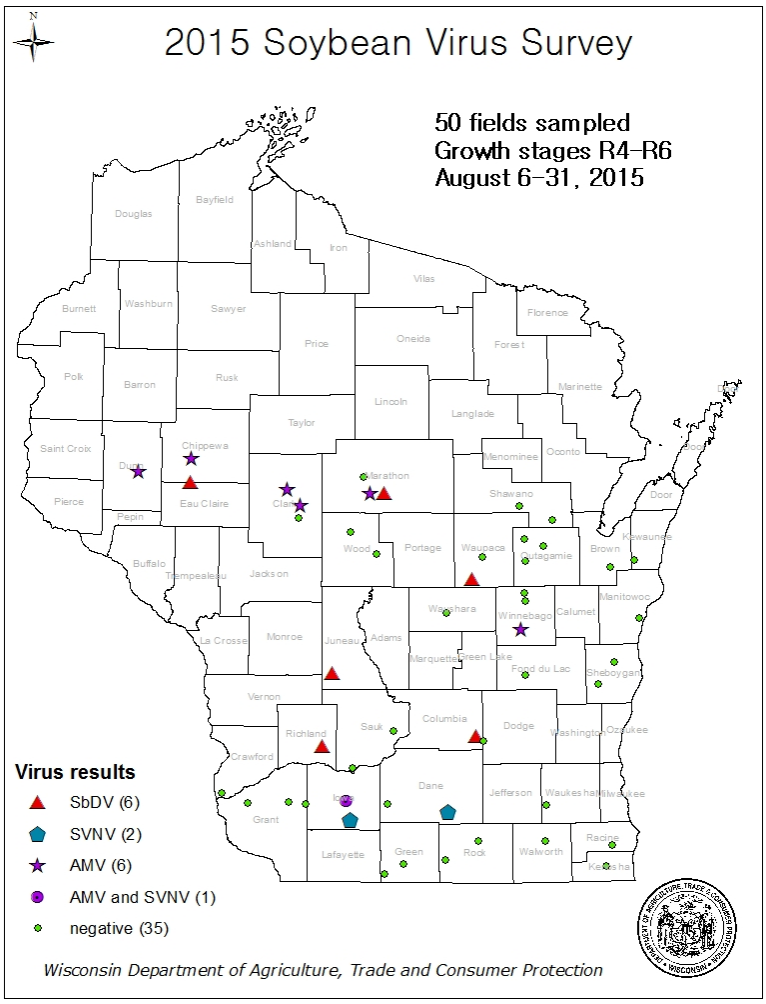
This brings the total number of new Phytophthora species detected during this annual survey of Wisconsin soybean fields up to five, including ***P. pini* and *P.* sp. *personii*** found in 2014.

Soybean Virus Survey - From Aug 6 to 31, 2015 the pest survey team sampled 50 fields for three viruses, frogeye leaf spot and Asian soybean rust. Soybeans were in the R4-R6 stages at the time of the survey. Soybean dwarf virus (SbDV) was detected in 6 of 50 fields (12%), half of last year's 24% level. Alfalfa mosaic virus (AMV) increased from 3.2% in 2014 to 12% (6 of 50) in 2015. Soybean vein necrosis virus (SVNV) remained at similar levels with 3 of 50 (6%) fields testing positive compared to 4.5% in 2014. SVNV finds have leveled off since the initial detection in 2012 when 35% of fields tested positive. This virus is transmitted by thrips that were reported to be at low populations in 2015. Frogeye leaf spot and Asian soybean rust were not detected during the 2015 survey.



Goss's wilt of corn was detected in four Wisconsin counties (Adams, Dane, Eau Claire and Rock) during seed corn field inspections in August. This bacterial disease caused by *Clavibacter michiganensis nebraskensis* was confirmed in 15 of 39 (38.5%) samples at Plant Industry Lab compared to (8.6%) in 2014. Stewart's wilt (*Pantoae stewartii*) was not detected. Northern corn leaf blight (*Exserohilum turcicum*) and common rust (*Puccinia sorghi*) were the most commonly found diseases. Southern rust (*P. polysora*) was not observed.

Virus screening of corn showed three fields testing positive for sugarcane mosaic virus or maize dwarf virus (SCMV/MDMV) in Dane county. Maize chlorotic mottle virus (MCMV) and high plains virus (HPV) tests were all negative. MCMV, present in Kansas and Nebraska, is not known to occur in Wisconsin. This virus causes maize lethal necrosis disease when plants are co-infected with other potyviruses. This disease, present in Hawaii, parts of Africa, Mexico, South America and China, is of phytosanitary concern to some exporters.

Tar spot (*Phyllachora maydis*), a new disease reported on corn in Indiana and Iowa, in early September of 2015, was not observed in Wisconsin during seed inspections and pest survey.