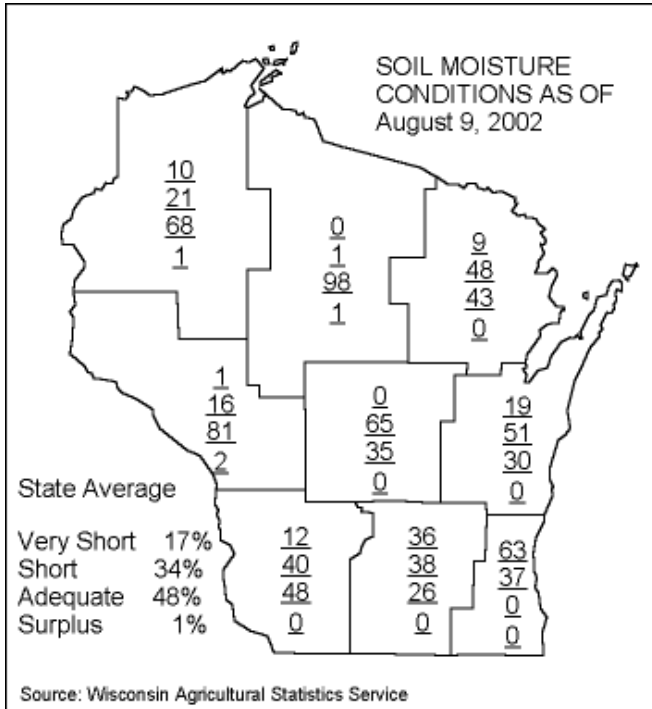


# Cooperative Pest Survey Bulletin

## Agricultural Resource Management

Bureau of Plant Industry

WI Department of Agriculture, Trade & Consumer Protection, PO Box 8911, Madison, WI 53708-8911 Phone: 1-800-462-2803 Fax: 608-224-4656 Web: Wisconsin.gov

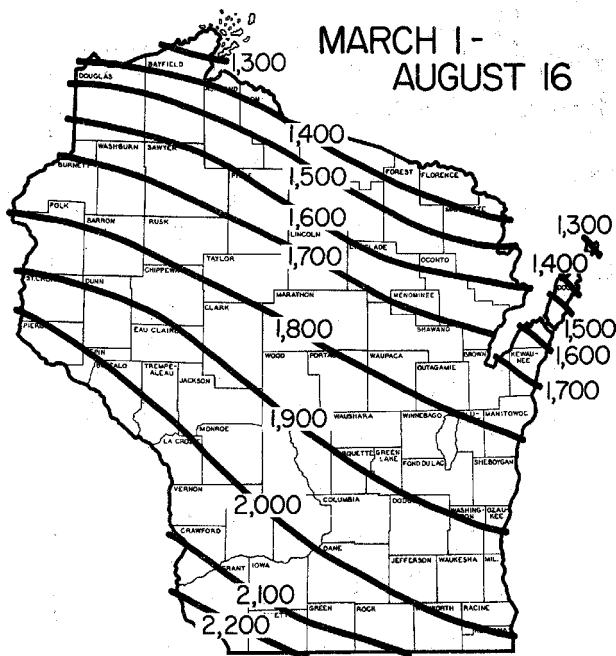


### WEATHER AND PESTS

Large portions of the Badger state received much needed rain, improving harvest outlook greatly. Flooding occurred in a few localized areas.

Growing degree days from March 1 through August 14 were:

Site	GDD*	2001 GDD	Normal GDD	Base 48	Base 40
<b>SOUTHWEST</b>					
Dubuque, IA	2113	2127	2203	2025	3338
Lone Rock	2004	1997	2027	1909	3204
<b>SOUTHCENTRAL</b>					
Beloit	2119	2158	2071	1910	3366
Madison	1987	2015	2017	1877	3176
Sullivan	2045	2098	1958	1856	3278
Juneau	1984	2056	1866	1837	3169
<b>SOUTHEAST</b>					
Waukesha	2012	2023	1808	1826	3220
Hartford	1960	2006	1866	1824	3131
Racine	1973	1928	1955	1832	3139
Milwaukee	1921	1892	1931	1800	3069
<b>EAST CENTRAL</b>					
Appleton	1839	1881	1776	1784	2960
Green Bay	1704	1763	1689	1660	2788
<b>CENTRAL</b>					
Big Flats	1916	1911	1897	1840	3060
Hancock	1905	1920	1844	1830	3042
Port Edwards	1814	1814	1849	1790	2917
<b>WEST CENTRAL</b>					
LaCrosse	2107	2061	2013	1959	3319
Eau Claire	1954	1960	1889	1860	3089
<b>NORTHWEST</b>					
Cumberland	1738	1823	1750	1761	2786
Bayfield	1326	1440	1257	1381	2250
<b>NORTH CENTRAL</b>					
Wausau	1686	1681	1726	1742	2744
Medford	1592	1671	1721	1651	2617
<b>NORTHEAST</b>					
Crivitz	1602	1662	1600	1592	2649
Crandon	1523	1615	1542	1544	2520



Historical Average Growing Degree-Days Accumulated Since March 1. (Wisconsin Agricultural Statistics Service)

GDD (Growing Degree-Days) are synonymous with degree-days above modified base 50°F, with no low temperature below 50°F or above 86°F used in calculation. See map for Historical Average Growing Degree Days.

## CORN

**European corn borer** – Increasing numbers of moths appeared in black light traps throughout the state. In the southeast, empty pupal cases now appear to outnumber 5<sup>th</sup> instar larvae, whereas dissections of field corn in Sauk Co. revealed mostly viable pupae. In Adams, Brown and Shawano Cos., infestations in 10-20% of the plants in the fields surveyed were detected earlier this week.

The European corn borer pupae now present will make up the second flight of moths. Activity of this second moth flight is related directly to temperature, so we're likely to see both surges and pauses in egg laying during the next several weeks, depending upon evening temperatures.

In some areas, late-planted processing corn and fresh market sweet corn is still vulnerable to ear damage. In fresh market sweet corn, the presence of a single larva results in loss of the entire ear due to consumer rejection, and in canning corn, a larva or larval damage in the kernels requires handling and trimming of the ear prior to processing. Once egg masses begin to hatch in early August, canners are encouraged to make frequent plant examinations for eggs on all sweet corn that is more than 12 days from harvest. A spray should be applied when at least one of ten plants has an egg mass, as soon as the first blackhead stage or hatched egg mass detected. When egg mass densities are lower than this, hold off treating until the level is attained. Once application starts on a given field, repeat applications every 5 to 6 days or until the number of unhatched egg masses drop below 1 per 10 plants, or the corn matures to within 12 days of harvest. Generally more than one application is needed on processing or fresh market sweet corn to suppress second generation corn borer populations.

Control of second generation corn borer in field corn is often of less concern than first generation control, despite the fact that most of the plant damage evident at harvest comes from second generation larvae. The treatment threshold for second generation corn borer is based on the number of egg masses. Unfortunately, detecting egg masses on plants at this time of year is far more difficult than detecting egg masses earlier in the season. The best method is to walk through a field and strip the leaves from at least 50 plants. Carefully examine the undersides for the pale white unhatched egg masses or the remains of recently-hatched egg masses along the midrib. Treat when the numbers of hatched/unhatched egg masses exceeds an average of 1 per plant. A single insecticide application early in the hatching period, generally around mid-August in southern Wisconsin, is an appropriate measure to take when egg mass counts exceed the economic threshold.

Many areas have already surpassed the most effective treatment window. Growers in these regions should keep this in mind, and employ the following helpful cultural practices

whenever possible:

- 1) Plow under old stalks by mid-May of each year.
- 2) Avoid very early and very late plantings.
- 3) Select varieties with the most resistance to first generation attack.
- 4) When possible, harvest early to prevent excessive stalk breakage and/or ear drop
- 5) Chop corn fodder to destroy potential overwintering population of larvae.

### *Western Corn Rootworm*



*Jim Kalisch, UNL Department of Entomology*

**Corn rootworm** – Populations were high in Walworth Co. fields, where beetle counts were 3.1, 3.6, 4.1, and 5.2 per plant in the fields surveyed. Jefferson Co. fields had slightly lower counts, ranging from 0.6 to 1.3 beetle per plant. Above-threshold counts averaging 2.0 beetles per plant were detected in Shawano Co. fields. Judging from this week's survey observations, the western variant seems to predominate over most of the state.

**Corn earworm** – Pheromone trap catches are on the rise at sites near Oakfield, Chippewa Falls and Coon Valley, and a few moths have turned up in a blacklight trap near Mazomanie. The major flight, however, is not expected to begin until the last week of August.

Late-planted sweet corn is vulnerable to corn earworm in late August and early September because the fresh silk attracts female moths for egg laying. At 75°F, corn earworm eggs will hatch within 4 days of being deposited. Newly hatched larvae crawl immediately into the silk channel at the ear tip and begin feeding. During the approximately 14 days required for the larvae to mature, they move very little and feeding is mostly confined to the ear tip. Second generation corn earworm moths deposit eggs on the last of the fresh market sweet corn and larvae mature at a slow rate during the cool days of September. Individuals that reach the pupal stage in fall may overwinter.

Corn earworm damage to sweet corn is primarily aesthetic, but consumers often reject sweet corn when any amount of damage appears on the ear. Therefore, scouting late-planted corn is recommended at this time. Treatment is justified when more than 10% of the silk masses have corn earworm eggs. This applies only to plantings with fresh silks or with silks just beginning to dry.



### FORAGES

**Potato leafhopper** – Populations have declined in many uncut alfalfa fields in the south central region, but a number of fields in the southeast remain under pressure from potato leafhopper. The decline may be due to slowed reproduction, recent rainfall, or cooler evening temperatures. Leafhopper counts ranged from 0.6 to 2.0 per sweep in some northern counties, to 2.6 to 5.0 per sweep in the southeast.

**Pea aphid** – Counts are low in general, seldom exceeding 14 per sweep in Dane, Jefferson and Walworth Co. alfalfa fields.

### SOYBEANS

**Soybean aphid** – Per plant counts were variable this week. Heavy populations were encountered in R5 stage Juneau Co. soybean fields, where aphid numbers ranged from 130-630 per plant in one field, and 70-485 per plant in another. Lower averages of 59, 67, 74 and 101 aphids per plant were detected in southeastern fields, and the **bean leaf beetle** has emerged as the primary insect of concern. Aphid presence was confirmed as far north as Barron Co. in the northwest agricultural district.

**Bean leaf beetle** – Considerable defoliation, averaging 30%, was encountered in R5-R6 stage Dane, Jefferson and Walworth Co. soybean fields. Counts of adults fell below 5 beetles per foot of row in all fields surveyed. Some pod damage, less than 10%, was apparent Jefferson Co. fields. Defoliation was observed as far north as Barron Co., but to a lesser extent, according to the surveyor in that region.

**Downy mildew** – Symptoms of soybean downy mildew are easy to find in susceptible soybean fields as far north as Polk and Barron Cos. As we reported two weeks ago: “The disease, caused by *Peronospora manshurica*, is characterized by pale yellow spots on the top of young soybean leaves. As the spots age, they will turn grayish-brown, and masses of gray spores will be produced on the underside of infected leaves.” Definite differences in varietal response are now apparent, as fields next to one another will show dramatically different incidences of the disease.

### HUMANS AND ANIMALS

**West Nile Virus infecting horses**- Animal health officials say there is a strong probability that a horse near the Village of Newburg in Washington Co. has died from West Nile virus. It would be Wisconsin’s first case of West Nile virus (WNV) in a species other than birds.

The horse died Aug. 2 after coming down with symptoms of the mosquito-borne disease a day earlier. An initial test at the Wisconsin Veterinary Diagnostic Laboratory in Madison was positive.

“We’re waiting for final confirmation from the National Veterinary Services Laboratory in Ames, Iowa,” said State Veterinarian Dr. Clarence Siroky of the Wisconsin Department of Agriculture, Trade and Consumer Protection. “But the initial test showed higher levels of WNV antibodies in the horse’s blood than would be expected from the single dose of vaccine it had received last spring. We’ve seen many cases this summer of infected horses in the Midwest and elsewhere, including quite an outbreak in Minnesota, so we’re not really surprised by this finding. Once again, we do want to remind horse owners that they may be able to prevent WNV with vaccinations and some other control measures.”

### FOREST, SHADE TREE, ORNAMENTALS AND TURF

**Aphids** - Found on spirea, daylilies, white birch and quince in light to moderate amounts in Iowa, Lafayette, Ozaukee and Waupaca Cos.

**Arborvitae needleminer** - Found at nursery growers in Kenosha and Waupaca Cos. in light to moderate amounts.

**Ash flower gall** - Found in trace to heavy amounts on green ash and leprechaun ash in localized and patchy areas of nurseries in Kenosha and Ozaukee Cos.

**Ash plant bug** - Found on green and white ash in trace to moderate amounts in Kenosha, Ozaukee, Walworth and Waukesha Cos.

**Bagworm** - Found on Techny arborvitae in localized heavy amounts in Ozaukee Co.



**Balsam twig aphid** - Light amounts of damage was noted in balsam fir in Taylor Co.

**Birch leafminer** - Damage found in white birch and paper birch in light amounts in Columbia and Walworth Cos.

**Bronze birch borer** - Found on paper and white birch in Clark, Ozaukee and Sawyer Cos. causing localized heavy damage.

**Cutworms** - Damage found on hosta in Lafayette Co. in patchy areas in light amounts.

**Eriophyid mites** - Found doing damage in little leaf linden in trace amounts in Ozaukee Co.

**Eastern spruce gall adelgid** - Found on Colorado and Black Hills spruce in Barron, Clark and St. Croix Cos. in light amounts.

**Fall webworm** - This common gregarious caterpillar was noted on river birch in localized moderate amounts in Ozaukee Co.

**Grasshoppers** - Found feeding on Colorado spruce in Barron and St. Croix Cos. doing light to moderate damage.

**Honeylocust plant bug** - On honeylocust in light to moderate amounts in Iowa, Lafayette and Ozaukee Cos.

**Imported pine sawfly** - Found on white pine in localized light amounts in Columbia Co.

**Imported willow leaf beetle** - Weeping willow leaved weres being munched by this pest in Kenosha Co.

**Japanese beetle** - Found on a wide selection of nursery stock like plum, hydrangea, flowering almond, serviceberry and oak in light to heavy amounts in Walworth Co.

**Leaf curling aphids** - In light amounts on Patmore and autumn purple ash in Sawyer and Taylor Cos.

**Leaf crumpler** - Found on Coralburst crabapples in Iowa Co. in light amounts.

**Leaf galls** - Found on lindens and silver maple in light amounts in Barron, Kenosha and Ozaukee Cos.

**Leafhopper** - Found in Kenosha, Ozaukee, Sawyer, St. Croix, Taylor and Walworth Cos. doing light to moderate damage on serviceberry, pears, red maple, honeylocust, purple leaf birch, weeping Siberian peashrub, apples and highbush cranberry viburnum.

**Leafminers** - Found on thornless cockspur hawthorn in Ozaukee and Walworth Cos. with trace amounts of damage.

**Leucanium scale** - Found on ash in patchy areas in trace amounts in Ozaukee Co.

**Linden borer** - Found in localized areas of a grower in trace amounts in American linden in Ozaukee Co.

**Spruce gall midge (*Mayetiola piceae*)** - This midge was infesting Colorado spruce in Taylor Co. in light amounts.

**Midrib gall** - Found in white ash in localized trace amounts in Ozaukee Co.

**Nipple gall** - On hackberry in trace to heavy amounts in Columbia and Ozaukee Cos. This common leaf gall is caused in hackberries by a small insect called a psyllid.



**Oak leafminers** - Damage in trace amounts found on swamp white oak in Kenosha and Ozaukee Cos.

**Pale green weevil** - Found on linden in light to moderate amounts in Ozaukee Co.

**Red spider mites** - Found on Techny arborvitae in light amounts in Sawyer Co.

**Sawfly** - Found in Barron Co. on Colorado spruce in moderate amounts in a localized area.

**Slugs** - Found on hosta in moderate amounts in Columbia and Walworth Cos.

**Spider mites** - Found in garden mums, arborvitae, Colorado spruce, and Freeman maples in light to moderate amounts in Columbia, Iowa, Ozaukee, Rock and Walworth Cos.

**Spotted tentiform leafminer** - Found on fruit apples and crabapples in Clark and Columbia Cos.

**Spruce needleminer** - Found on Colorado spruce in light amounts in Barron and St. Croix Cos.

**Thrips** - Found on Colorado spruce and Rushmore arborvitae in light to moderate amounts in Columbia and Iowa Cos.

**Two spotted spider mite** - Feeding damage from these tiny insects was noted on Autumn Blaze maple in light amounts in Clark Co.

**Whitefly** - Found on garden mums, hollyhock and speedwell in light to moderate amounts in Lafayette Co.

**Yellownecked caterpillar** - River birch, red oak and Redmond linden had moderate to heavy populations of this pest in Kenosha, Ozaukee and Walworth Cos.

**Zimmerman pine moth** - Found in light to moderate amounts in scotch pine in Walworth and Waukesha Cos.

**Apple scab** - Found on assorted crabapples in Clark, Columbia, Iowa, Kenosha, Ozaukee, Walworth, Waupaca and Waukesha Cos.

**Anthraxnose** - Found on green ash, river birch, red oak, swamp white oak, alpine current, redbud and berginia in light to heavy amounts in Iowa, Kenosha, Ozaukee, Walworth and Waukesha Cos.

*Leaf distortion caused by oak anthracnose*



*(Photo courtesy Mark Gleason, Iowa State)*

**Asteroma leaf spot** - Found on American and littleleaf linden in trace to moderate amounts in Columbia, Lafayette, Ozaukee and Walworth Cos.

**Bacterial leaf spot** - Found on Annebelle hydrangea and lilac in light amounts in Iowa and Ozaukee Cos., and on saucer magnolias in light amounts in Iowa Co.

**Black spot** - Found on assorted roses in Clark, Kenosha,

Ozaukee and Walworth Cos.

**Cedar -Apple rust** - Found on apples and hawthorns in Clark, Columbia, Iowa, Kenosha, Ozaukee and Walworth Cos.

**Cyclaneusma needle cast** - Found on Scotch pine from St. Croix Co. from a sample submitted to our lab.

**Diaporthe canker** - Identified by our lab on apple tree sample from Manitowoc Co.

**Dothistroma needle blight** - Found on Austrian pine in light to moderate amounts in Walworth Co.

**Entomosporium leaf spot** - Found on Peking cotoneaster and mountain ash in light amounts in Iowa and Ozaukee Cos.

**Frogeye leaf spot** - Found on crabapples in localized areas in light to moderate amounts in Ozaukee Co.

**Gall rust** - Found in St. Croix and Walworth Cos. on Scotch pine in trace to light amounts.

**Leaf scorch** - Found on hosta, variegated maple and Japanese maple in trace to moderate amounts in Columbia, Lafayette and Walworth Cos.

**Oak tatters** - Found on red oak in light amounts in Rock Co.

**Phomopsis tip blight** - Found on Japanese garden juniper in patchy areas in light amounts in Ozaukee Co.

**Phyllosticta leaf spot** - On red, amur, Freeman, sugar and Norway maple in trace to moderate amounts in Columbia, Ozaukee, Walworth and Waupaca Cos.

**Powdery mildew** - Found in light to heavy amounts in Columbia, Iowa, Kenosha, Ozaukee, Taylor, Walworth and Waupaca Cos. on Joe-pye weed, honeysuckle, lilac, serviceberry, snowberry, alpine current and roses.

**Pythium root rot** - Found in plantings of Fraser fir and red pine in Portage Cos.

**Quince rust** - Found on both thornless and regular cockspur hawthorn in light amounts in Kenosha, Ozaukee, Sawyer and Walworth Cos.

**Red spot** - Found on peony plants in light to moderate amounts in Columbia, Iowa and Lafayette Cos.

**Rhizosphaera needlecast** - Found on Colorado spruce in light to moderate amounts in Barron, Lafayette and St. Croix Cos.

**Septoria leaf spot** - Found on many types of dogwood and spirea in light to moderate amounts in Columbia, Iowa,

Kenosha, Ozaukee, Rock, Taylor, Walworth, Waupaca and Waukesha Cos.

**Shothole disease** - Found on purple leaf plum and Canada red chokeberry in light amounts in Iowa and Ozaukee Cos.

**Mystery fungus associated with spruce** - On Colorado spruce in Columbia, Ozaukee and Taylor Cos. in light amounts.

**Spruce needle rust** - Found in Sawyer Co. on White Spruce in light amounts.

**Swiss needlecast** - Found on Douglas fir in light to moderate amounts in Lafayette Co.

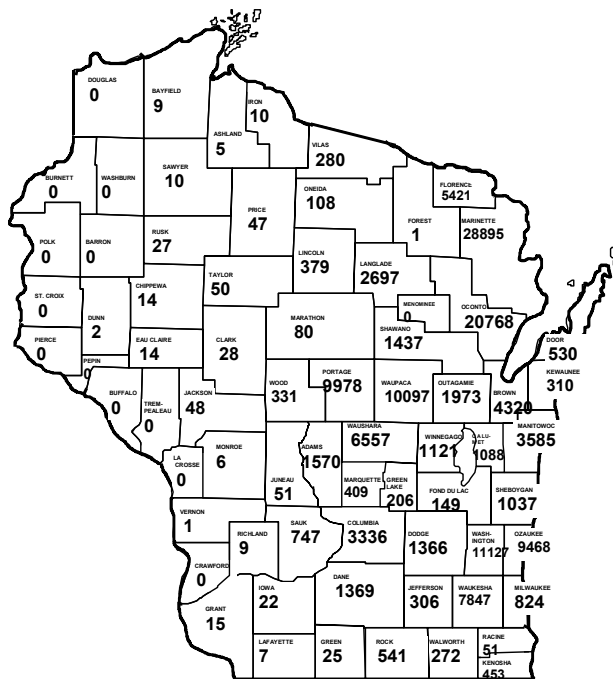
**Tar spot** - Found on Freeman maple and silver maple in trace to light amounts in Barron, Ozaukee, St. Croix, Walworth and Waupaca Cos.

**White pine blister rust** - Found in St. Croix Co. on white pine in light amounts in patchy areas.

**STATE / FEDERAL PROGRAMS**

Gypsy Moth Mid-Season Trap Check  
(as of 8/14/02)

Trap check results: **141, 434 moths**  
This does not include cooperator data.  
Not all counties have started the mid-season trap check.



*Obliquebanded leafroller adult*

**FRUIT**

**Obliquebanded leafroller** – According to cooperator John Aue, moth flight began last weekend in the southwest, approximately 10 to 14 days earlier than expected. This, he says, is a cause for concern among orchardists in this region because an early start may lead to more problems with this generation. The larger the fruit grows before obliquebanded leafroller damage occurs, the more likely the fruit is to remain on the tree until harvest.



*Obliquebanded leafroller larva*

© Pennsylvania Tree Fruit Guide

**BLACKLIGHT TRAPPING RESULTS**

through August 14

Trap Site	Euro. Corn Borer	Army- Worm	Black Cutworm	Vari. Cutworm	Spot. Cutworm	Celery Looper	Forage Looper	Corn Earworm	Corn Earworm <i>Pheromone</i>
<b>South Central</b>									
Arlington <sup>2</sup>	310								
Madison									
Mazomanie	161	32	0	0	0	27	22	13	
Janesville	140	21	0	0	1	22	39	3	
Reedsburg	93	5							
<b>West Central</b>									
Coon Valley									18
<b>East Central</b>									
Oakfield	165							3	101
Manitowoc	9	0	0	0	14	4		0	
<b>Central</b>									
Marshfield	29	13	3		19		5	34	
<b>Northwest</b>									
Chippewa	121								34

**APPLE INSECT TRAPPING RESULTS**

County City	Date	STLM	RBLR	CM	OBLR	AM <i>red ball</i>	AM <i>sticky</i>
<b>Crawford Co.</b>							
Gays Mills-W2	8/5-8/12	60	5	1	3	0	0
Gays Mills-E2	8/7-8/14	70	12	3	14	0	0
<b>Richland Co.</b>							
Hill Point	8/8-8/12	260	3	1	3	4	0
Richland Center-W	8/7-8/14	240	22	3	8	1	0
Richland Center-E	8/7-8/14	210	10	3	10	1	0
<b>Dane Co.</b>							
Deerfield	8/6-8/13	560	10	0	0	2	
<b>Pierce Co.</b>							
Spring Valley	8/7-8/14	94	1	0	9	0.25	0
Beldenville	8/3-8/10	500+	7	6	2	0	0
<b>Fond du Lac Co.</b>							
Rosendale	8/5-8/12	25	4	2	3	0	0
Malone	8/6-8/12	40+	20	5	2	0	2
<b>Adams Co.</b>							
Oxford	8/5-8/12	216	7	2	1	0	0
<b>Marquette Co</b>							
Montello	8/5-8/12	2210	13	7	3	5	0
	7/29-8/5	864	94	30	0	0	0
<b>Ozaukee Co.</b>							
Mequon	8/6-8/14	175	6.5	0.8		4.5	
<b>Racine Co.</b>							
Rochester	8/8-8/15	1301	0	1.5	0	0	0
<b>Brown Co.</b>							
Oneida	8/4-8/11	65	4	5	0	0	0

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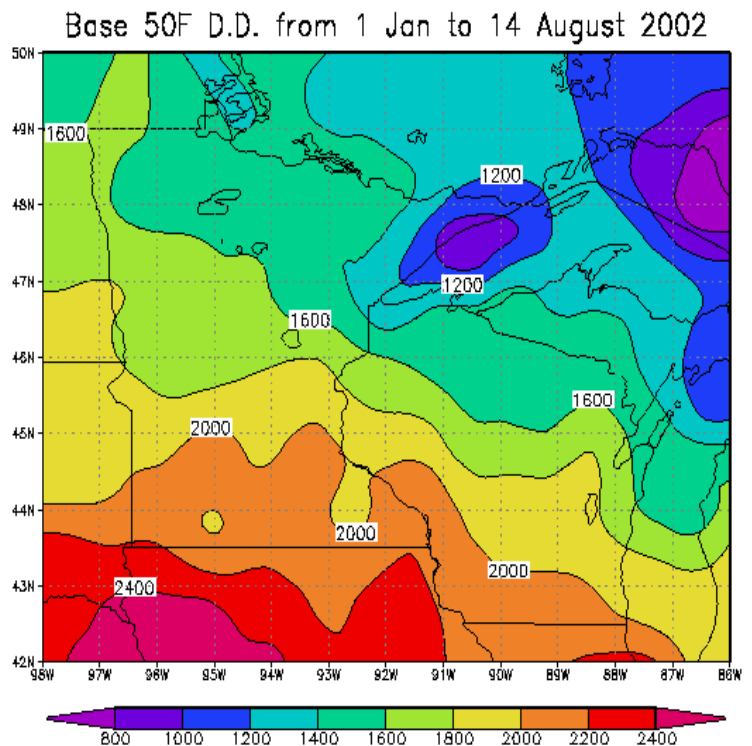


**Website of the Week:**

**Soybean Rust Pest Alert**

[http://www.aphis.usda.gov/ppq/ep/pestdetection/soybean\\_rust/soybeanrust.html](http://www.aphis.usda.gov/ppq/ep/pestdetection/soybean_rust/soybeanrust.html)

A new web site from USDA/AHPIS Plant Pest and Quarantine on this potentially destructive (and not-yet-present-in-the-US) fungal disease of soybeans. Color photos of symptoms, information on early detection, other diseases with similar symptoms, and soybean disease links. A chance to be prepared.



<http://bob.soils.wisc.edu/wimnext/tree/arbor.html>