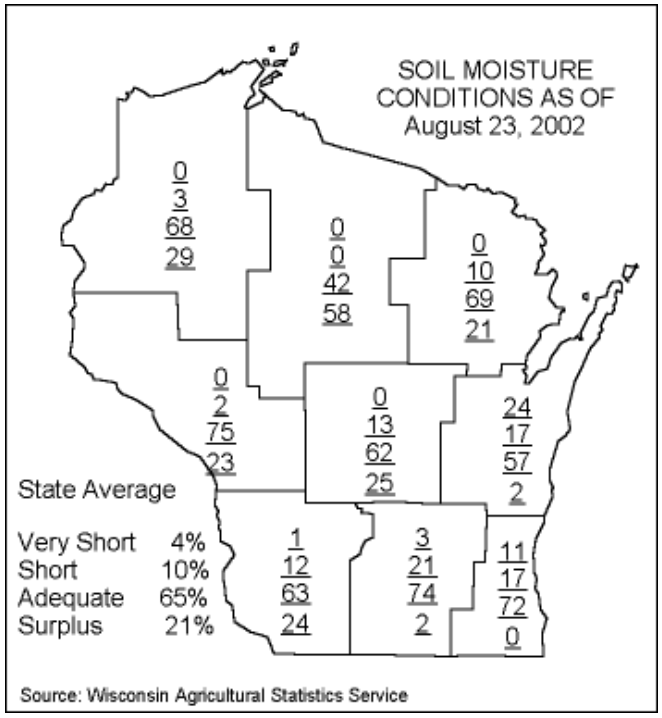
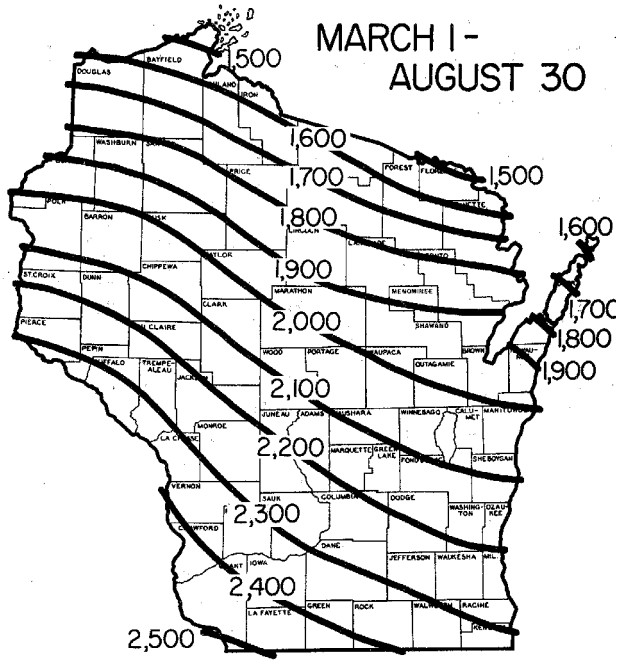
Cooperative Pest Survey Bulletin
Agricultural Resource Management
Bureau of Plant Industry
WI Department of Agriculture, Trade & Consumer Protection, PO Box 8911, Madison, WI 53708-8911 Phone: 1-800-462-2803 Fax: 608-224-4656 Web: Wisconsin.gov





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

WEATHER AND PESTS

Weather continues to be favorable for crop growth. Recent rains should help increase corn ear size. Tobacco harvest is underway, and apple harvest is beginning. See **WEBSITE OF THE WEEK** for a weather tip.

Growing degree days from March 1 through August 28 were:

Site	GDD*	2001 GDD	Normal GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	2397	2393	2448	2325	3762
Lone Rock	2273	2253	2293	2204	3612
SOUTHCENTRAL					
Beloit	2414	2436	2327	2223	3803
Madison	2259	2275	2256	2177	3588
Sullivan	2338	2377	2193	2155	3710
Juneau	2259	2324	2084	2141	3585
SOUTHEAST					
Waukesha	2298	2298	2195	2129	3646
Hartford	2234	2277	2091	2125	3545
Racine	2253	2198	2204	2129	3545
Milwaukee	2190	2160	2163	2097	3559
EAST CENTRAL					
Appleton	2093	2142	1977	2067	3355
Green Bay	1944	2012	1888	1927	3168
CENTRAL					
Big Flats	2166	2161	2108	2115	3447
Hancock	2154	2172	2012	2106	3429
Port Edwards	2048	2054	2069	2051	3290
WEST CENTRAL					
LaCrosse	2378	2318	2279	2256	3728
Eau Claire	2212	2221	2096	2146	3486
NORTHWEST					
Cumberland	1967	2054	1951	2015	3152
Bayfield	1504	1557	1449	1584	2565
NORTH CENTRAL					
Wausau	1913	1897	1931	1994	3108
Medford	1804	1897	1886	1888	2965
NORTHEAST					
Crivitz	1833	1898	1799	1849	3018
Crandon	1736	1821	1732	1781	2868

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.

ALERTS

Apple maggot – This week's counts suggest that higher than normal numbers of apple maggot flies are emerging, and could continue to do so into September. Growers should monitor closely until harvest.

Corn earworm – Moth activity had increased at some pheromone trapping sites. Sweet corn growers should continue to be wary of late infestations.

Potato mop top virus found in the United States- This month, Canada quarantined all potatoes originating from nine U.S. states (ME, FL, NC, VA, OR, WA, MD, CA, and ID) due to finds of potato mop top virus in potatoes from these states. For the past 18 months, Canada has been testing potatoes from the U.S. for various pathogens and found over 100 samples with potato mop top virus in the samples tested. The Canadian Food Inspection Agency (CFIA) is working with USDA-APHIS (Animal and Plant Health Inspection Service) to develop acceptable procedures to remove this quarantine from these nine potato-producing states. Importantly, there have been no reported finds of **powdery scab** or potato mop top virus in seed or table stock potatoes.

Potato mop top virus is transmitted by the fungus that causes powdery scab. The virus causes bright yellow foliar symptoms and can cause necrotic rings to form in the potato tubers. It is possible to have powdery scab without potato mop top virus in a potato field, and, in fact, this is the case for several potato producing states in the US.

There is no chemical control currently available for powdery scab, nor potato mop top. Also, there are no good sources of resistance or tolerance to potato mop top. Finally, both powdery scab and potato mop top virus can persist in soils for decades once the soil has become infested.

To keep this virus, and the fungus that vectors it out of Wisconsin fields, the best control measure is to not plant infected seed potatoes. Once infected seed potatoes are planted, the powdery scab fungus and virus will remain in the field and may cause problems for years to come. **(UW-Madison)**

CORN

Corn earworm – Counts in pheromone traps indicate that the major moth flight is underway. At several sites numbers have increased dramatically since last week. Sweet corn producers should continue to be wary of late-season infestations since late-planted sweet corn in the silk stage is highly vulnerable to infestation. Pheromone trap counts were: Sturtevant-436, Oakfield-1006, Coon Valley-112, Chippewa Falls-150, New Richmond-1948, and St. Croix Falls-298.

European corn borer – Several grain corn fields in the east central district had 12% to 67% of the plants infested with early instar larvae. In Wood and Portage Cos. fields, a much lower range of 2% to 30% was detected. Second through fifth instar larvae were observed in the fields surveyed.

FORAGES

Potato leafhopper – Counts in regrowth alfalfa in east central Wisconsin averaged 0.6 adults and nymphs per sweep in this week. In the central region, counts were even lower, averaging 0.2 per sweep. Reproduction seems to have slowed substantially across the state, but to be on the safe side, growers should continue to monitor until harvest.

Alfalfa caterpillar – Counts in the east central district averaged 2.2 larvae per sweep. No significant amounts of defoliation were noted in the fields surveyed.

SOYBEANS

Soybean aphid – Counts were low in soybean fields surveyed in the southeast and east central districts. Again this week, no fields warranting treatment for this pest were encountered. Counts have declined steadily over the last two weeks, and in most fields fewer than 50 aphids per plant were observed.

Bean leaf beetle – Feeding activity has slowed in most regions of the state. In Waupaca, Portage and Winnebago Co. soybean fields, defoliation ranged from 8-32%. Despite the decline, many fields may still be at risk for pod damage. In late August and early September, as soybean foliage dries, pod feeding often intensifies because the pods hold more moisture and become increasingly attractive to bean leaf beetles. Continue to monitor beetle activity in soybean fields and examine pods for feeding injury.

Bean leaf beetle

VEGETABLES

Squash bug – Populations of about 10 to 12 per fruit were noted on garden-raised zucchini in northern Dane Co.

Development ranged from egg to adult.

During this time of year, squash bugs feed on pumpkins, cucumbers, squash, watermelons and sometimes raspberries, but demonstrate a preference for squashes and pumpkins. Squash bugs damage plants by removing sap and causing leaves to wilt and collapse. Young plants and infested leaves on older plants may be killed as a result of squash bug feeding.

One effective method of controlling this pest is to look for yellow to brick-red egg clusters on the undersides of plant leaves. When a cluster is found, cut off and destroy that part of the leaf. Also, be sure to look for the gray nymphs under curled leaf edges or in dead or dying leaves. Adults can be hand-picked from plants and destroyed.

Squash bug

R. Bessin, Univ. of Kentucky Entomology

Asparagus beetle - Larvae remain common on asparagus foliage in Dane Co. Development ranged from second instar to full-grown larvae.

Late blight- Late blight is now being reported in the Plover and Galloway areas. in addition to the Plainfield/Hancock area, which has exhibited active late blight since late June. Active leaf lesions are being observed in an increasing number of fields. These leaf lesions are capable of producing a large amount of inoculum given the cool nights, warm days, fog and high relative humidity we've been experiencing in central WI. The potato industry has an extensive list of effective fungicides to choose from for late blight control. In addition to the protectant materials that include mancozeb, chlorothalonil, metiram and TPTH (tin), we have the newer late blight products that include Curzate, Acrobat, Previcur Flex and Gavel. Growers using Curzate, Acrobat or Previcur Flex need to mix these materials with one of the protectant materials listed above. Gavel is already formulated with mancozeb. Since we are approaching the end of the season, growers should consult the labels carefully for seasonal limitations on product use and abide by the label directions. Remember that the Bravo (chlorothalonil) labels allow growers to apply up to 16 lb ai per acre per growing season.

The tendency at this point in the season is to look at tuber size and try to maximize yield by delaying the application of vine desiccant. Many growers are reporting less than optimum size at the moment and are hoping for ideal growing conditions for the next 2-3 weeks. Consequently, they are considering not applying desiccant until they allow existing tubers to attain a more desirable size. With the amount of late blight in central WI and the prospects for further late blight spread, growers should be monitoring the situation carefully and killing as early as economically feasible. Also, once vine desiccants are applied, fungicide treatment should continue so that all green foliage and stems are protected from late season infection. Last season we saw small sprouts emerge from what appeared at a distance to be dead vines. Tiny late blight lesions were observed on these sprouts and since there were no fungicides being applied that late in the season, late blight could spread easily and contribute to some of the decay problems observed later in storage. **(UW-Madison)**

Early blight- This disease is increasing rapidly as vines begin to senesce and early dying takes its toll. It's way too late in the season to expect benefits from the use of Quadris fungicide. From a resistance management standpoint, the application of Quadris to heavily infected fields late in the season is a bad idea. In addition to Quadris and Gem products, it is likely that there may be additional strobilurin materials being marketed for use on potatoes next growing season. For the moment, any of the protectant fungicides such as mancozeb, chlorothalonil, metiram and TPTH will help to slow disease spread. **(UW-Madison)**

Snap bean viruses - During each of the past two years, growers in southern and eastern WI have experienced severe losses to a cocktail of plant viruses including **cucumber mosaic virus** (CMV) and **alfalfa mosaic virus** (AMV). A team of researchers at the UW has been following the soybean aphid and it's relationship to the virus epidemic we've observed. This year, field trials with 120 edible bean lines and cultivars are planted in cooperation with Craig Grau (UW Plant Pathology) at West Madison and Manitowoc locations. Other trials conducted by A.J. Bussan and J. Nienhuis (UW Horticulture) and Jeff Wyman (UW Entomology) are looking at other aspects of the virus problem. In addition, Dr. Tom German, UW Entomology, is conducting a statewide survey of bean plantings to determine the distribution of these and other viruses and the timing of infection. At the moment we are detecting the presence of CMV in widely dispersed commercial fields as well as our field trials in Madison and Manitowoc. At this point in the harvest season, we are not seeing the damage to pods observed in previous years. However, given the high amounts of CMV being observed in

late plantings, we are taking a wait and see approach as additional fields are sampled and harvested. **(UW-Madison)**

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Adana tip moth – Heavy amounts of damage were found on Austrian pine transplants at a nursery in Adams Co.

Ash plant bug – Small nymphs were observed on white and green ash at nurseries in Chippewa, Eau Claire, Jefferson, Rock and Waukesha Cos. Damage was light to moderate and widespread.

Birch leafminer – Small numbers of mines were present on paper birch at nurseries in Washington and Waukesha Cos.

Bronze birch borer – Moderate amounts of damage were found in B&B whitespire birch at a nursery in Chippewa Co.

Catalpa sphinx – Damage to catalpa trees was heavy at a nursery in Rock Co. Some trees had up to 75% defoliation.

Fall webworm – Scattered webs were seen on Canada red chokecherry, aspen and green ash at nurseries in Jefferson, Manitowoc and Rock Cos.

Flea beetles – Scattered damage was observed on weigela, hydrangea, ninebark and alpine currant at nurseries in Calumet and Rock Cos.

Greater ash sphinx (*Sphinx chersis*) – Small numbers of

Greater ash sphinx caterpillar

larvae (2-3.5 inches long) were observed feeding on white ash at a nursery in Jefferson Co.

Imperial moth – Although not a pest but a curiosity, nearly full grown larvae (approx. 4" long) were found feeding on sugar maple at a nursery in Rock Co.

Japanese beetle – Numbers are dropping off throughout the state and damage was likewise light on various trees and shrubs. Beetles were observed feeding on corn leaves in Rock Co.

Imperial moth caterpillar

Pale green weevil - Feeding damage was observed on lateral pine shoots in light amounts on white pine at a nursery in Eau Claire Co.

Pitch nodule maker - A moderate number of Scotch pine were being affected by this lepidopteran pest at nurseries in Langlade and Lincoln Cos.

Pitch nodule maker

Snowberry clearwing – Larvae approximately 2.5 inches long were found feeding on American highbush cranberry at a nursery in Jefferson Co. The adults resemble bumble bees.

Snowberry clearwing caterpillar

Spider mites – Light to moderate amounts of damage were observed on various shade trees and ornamentals at nurseries in Jefferson, Manitowoc, Racine, Rock and Washington Cos.

Viburnum shoot tip borer – American cranberry viburnum at a nursery in Rock Co. had a small number of shoots being killed by this sawfly pest.

Willow leaf beetle – Moderate to heavy amounts of damage were reported from a nursery in Waukesha Co.

Yellownecked caterpillar – Larvae were approximately 2-3 inches long feeding on linden and swamp white oak at a nursery in Rock Co. Damage was localized and moderate.

Zimmerman pine moth – Old pitch masses were found on Scotch pine at a nursery in Rock Co.

Annosum root rot- Annosum root rot has been confirmed killing pines in a plantation south of Brooklyn, WI. This is the first report of annosum in Green Co. **(DNR)**

Anthracnose - Leaf symptoms were found on ash, birch, oak, Alpine current, daylily, and berginia in light to moderate amounts in Jefferson, Manitowoc, Rock, Washington and Waukesha Cos.

Apple scab - Light to heavy numbers of lesions were found on apples and crabapples at nurseries in Eau Claire, Jefferson, Manitowoc, Racine, Rock, Washington and Waukesha Cos.

Asteroma leaf spot - American linden had moderate amounts of leaf spots at nurseries in Jefferson, Manitowoc, and Rock Cos.

Bacterial leaf spot - Annebelle hydrangea and dwarf Korean lilac had light to moderate amounts in Rock and Washington Co. nurseries.

Black knot - Patches of knots were found in moderate amounts in a Jefferson Co. nursery on Canada red chokeberry.

Black spot - Moderate to heavy amounts of this disease were found on roses in Eau Claire, Washington and Waukesha Co. nurseries.

Botrytis – Light amounts of damage were observed on hydrangea and peony in a Rock Co. nursery.

Dothistroma needle blight - This fungal disease was found on Austrian and mugo pine in light to heavy amounts at nurseries in Washington and Waukesha Cos.

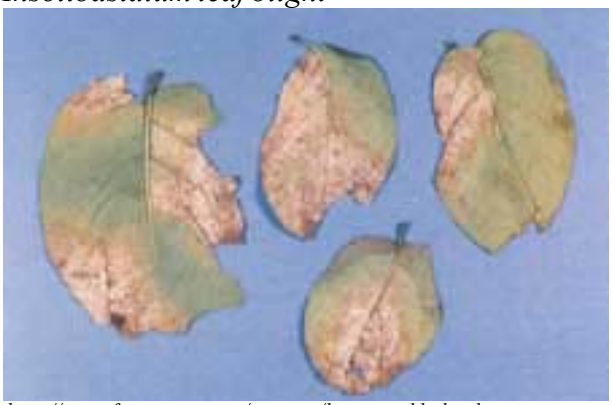
Entomosporium leaf spot – This disease was occurring on serviceberry and Peking cotoneaster in moderate to heavy amounts in Jefferson and Rock Co. nurseries.

Frogeye leaf spot – Light amounts of leaf spotting were occurring on crabapples in Calumet and Manitowoc Co. nurseries.

Guinardia leaf blotch - Light leaf damage was found on horsechestnut in Jefferson, Rock and Washington Co. nurseries.

Insolibasidium leaf blight - Arnold's red honeysuckle had light amounts of this fungus at a nursery in Rock Co.

Insolibasidium leaf blight



http://www.forestpests.org/nursery/honeysuckle.html

Peach leaf curl – This common disease of peach was found in trace amounts in Manitowoc Co. nursery.

Pestalotiopsis – This fungal disease of arborvitae was confirmed by our lab on a sample taken from a Waupaca Co. nursery.

Phyllosticta leaf spot - This fungal leaf spot was found on many types of maple including, amur, Norway, silver, tartarian and freeman in light to moderate amounts in Calumet, Jefferson, Manitowoc, Rock and Washington Co. nurseries.

Cedar-quince rust - Light to moderate amounts were found on cockspur and thornless cockspur hawthorn at nurseries in Chippewa, Eau Claire, Jefferson and Waukesha Cos.

Red spot – This fungal disease was found on peony in light to moderate amounts in Rock, Washington, and Waukesha Co. nurseries.

Septoria leaf spot - Leaf spots were common on variegated and red twig dogwood, but also found on spirea and pagoda dogwood in light to moderate amounts in Calumet, Eau Claire, Jefferson, Manitowoc, Rock, Washington and Waukesha Co. nurseries.

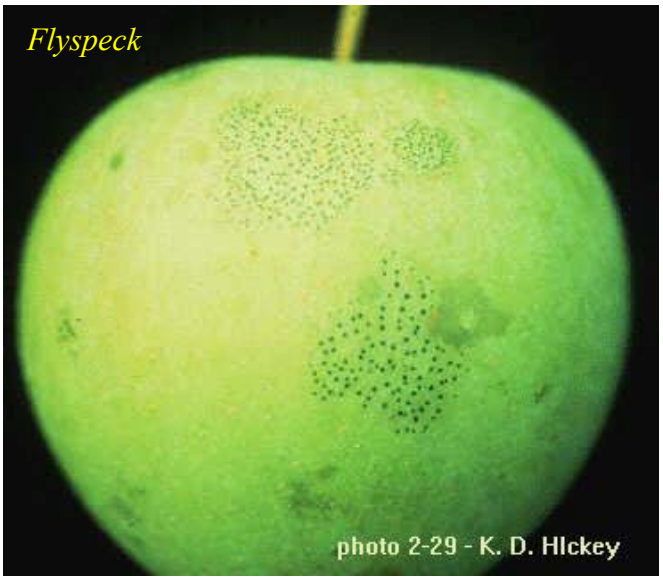
Swiss needlecast – Light amounts were found on douglas-fir in light to moderate amounts in a Rock Co. nursery.

Tar spot- This leaf spot was occurring on silver, amur, and freeman maple in light to moderate amounts at nurseries in Calumet, Eau Claire, Jefferson, Manitowoc, Racine, Rock, Washington, and Waukesha Cos.

Verticillium wilt - Patches of damage were observed in amur maple at a nursery in Jefferson Co.

White pine blister rust – Rust cankers were found in a localized area of a nursery on white pine in Eau Claire and Rock Cos.

Yellow blotch – Light amounts of leaf spots were found on black walnut in Waukesha Co. nursery.



FRUIT

Apple maggot – Several trappers in the southern counties caught higher than normal numbers of flies this week. An Ozaukee Co. trapper caught 12 flies on a red ball trap last week and 15 flies this week. He reported actually seeing flies landing on fruit in the orchard. Our Racine Co. cooperator had his highest catches of the season this week (9 flies in 11 red ball traps). Further, our cooperator who monitors traps in Richland and Crawford Cos. reported observing blocks with some apple maggot counts at threshold level. It is likely that the rains we had recently contributed to this higher than normal emergence of flies in the last week or two. This trend may persist into September, so growers are encouraged to continue to monitor closely for apple maggot until harvest.

Apple dissections – Dissections of 20 untreated Cortland apples in northern Dane Co. yielded the following: **apple maggot** tunnels in 45% of the apples; **codling moth damage** in 25% of the apples (two tunnels were vacant, one apple contained a third instar larva, and two apples contained plump fifth instar larvae). About half of the fruits had old **plum curculio** damage, and about 90% of the fruits had **apple scab.**

Multicolored Asian ladybeetle – Adults are numerous in untreated apple trees in northern Dane Co.

Flyspeck –This disease, characterized by clusters of black shiny specks on the fruit surface, is beginning to show up in orchards in the Southwest. The individual specks are fruiting structures in which spores are formed. Although the surface blemishes associated with flyspeck are unattractive, they do not cause decay. A slight increase in water loss may occur, or storage life can be shortened somewhat, but the primary concern with flyspeck is aesthetic. This disease tends to be worse during wet growing seasons.

BLACK LIGHT TRAPPING RESULTS

through August 28

Trap Site	Euro. Corn Borer	Army-Worm	Black Cutworm	Vari. Cutworm	Spot. Cutworm	Celery Looper	Forage Looper	Corn Earworm	Corn Earworm *Pheromone*
Southeast									
Sturtevant									436
South Central									
Mazomanie	31	12	0	0	0	16	19	32	
Janesville	37	35	1	0	0	23	51	41	
Reedsburg	87	134							
West Central									
Coon Valley									112
East Central									
Oakfield	146							286	1006
Manitowoc	1	4	1	14	0	2	0	0	
Northwest									
Chippewa Falls	44								150
Cameron	7								
New Richmond	8					3		3	1948
St. Croix Falls									298

APPLE INSECT TRAPPING RESULTS

County City	Date	STLM	RBLR	CM	OBLR	AM *red ball*	AM *sticky*
Crawford Co.							
Gays Mills-W2	8/19-8/26	0	8	0	1	0	0
Gays Mills-E2	8/21-8/28	110	15	1	8	0	0
	8/14-8/21	370	47	2	17	1	0
Richland Co.							
Hill Point	8/21-8/27	210	8	1	1	0.5	0
Richland Center-W	8/21-8/28	80	6	3	2	0	0
	8/14-8/21	110	29	11	11	0	0
Richland Center-E	8/21-8/28	340	20	1	6	1	0
	8/14-8/21	260	52	1	13	0	0
Dane Co.							
Deerfield	8/20-8/27	15	63	2	0	5	
Green Co.							
Brodhead	8/20-8/27	11	12	1	3	0	0
Jackson Co.							
Hixton	8/20-8/26	30		2			1
Fond du Lac Co.							
Rosendale	8/19-8/26	27	4	2	3	0	0
Malone	8/21-8/26	15	8	2	1	2	2
Adams Co.							
Oxford	8/19-8/26	62	15	0	0	2	0
Marquette Co							
Montello	8/19-8/26	72	12	0	4	0	0
Ozaukee Co.							
Mequon	8/20-8/28	500	9	0.8		15	
	8/14-8/19	225	14	1.5		12	
Racine Co.							
Rochester	8/22-8/29	158	153	4.75	0	0.82	0

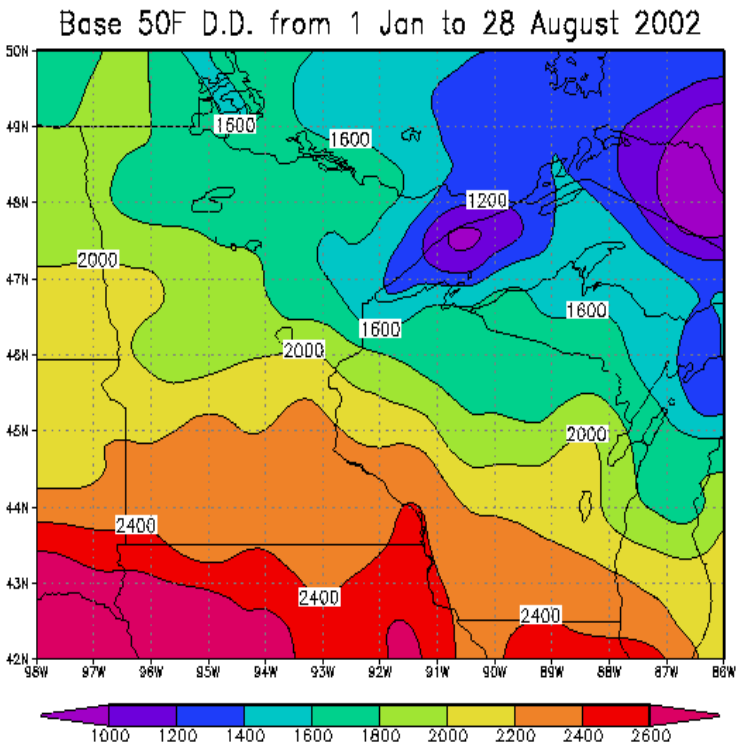
WEBSITE OF THE WEEK

http://iwin.nws.noaa.gov/iwin/wi/wi.html

Interactive Weather Information Network (IWIN), from the National Oceanic and Atmospheric Administration (NOAA)

A simple, easy-to-use link to Wisconsin's weather. Includes long- and short-term forecasts, satellite and radar, and warnings and advisories (with nary an advertisement in sight!).

You can also access world and historical weather information, agriculture-focused weather reports, and crop bulletins. There are text-only options for slower computers.



http://www.soils.wisc.edu/wimnext/tree/arbor.html