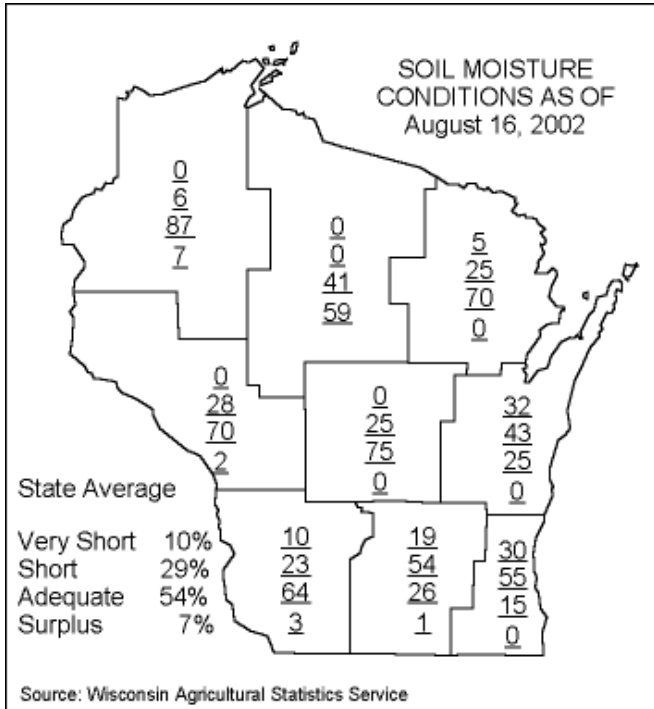


Cooperative Pest Survey Bulletin

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

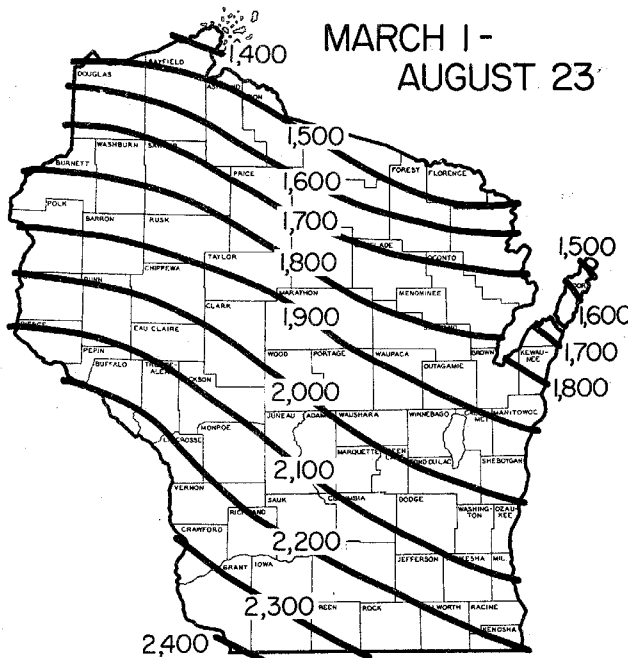


WEATHER AND PESTS

A good soaking this past week improved most of the crops throughout the state. The heavy rains that fell over the southern part of the state may provide conditions favorable for the development of late-season plant diseases. **Leafhopper** populations are decreasing on alfalfa, while **corn root-worm** is making its presence known, causing lodging in some fields.

Growing degree days from March 1 through August 21 were:

Site	GDD*	2001 GDD	Normal GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	2238	2249	2358	2152	3533
Lone Rock	2125	2113	2238	2043	3394
SOUTHCENTRAL					
Beloit	2262	2287	2253	2056	3580
Madison	2115	2132	2160	2019	3374
Sullivan	2188	2226	2117	1992	3491
Juneau	2118	2178	2009	1985	3373
SOUTHEAST					
Waukesha	2154	2151	2075	1971	3432
Hartford	2095	2132	1992	1972	3336
Racine	2115	2057	2108	1978	3352
Milwaukee	2056	2019	2062	1950	3275
EAST CENTRAL					
Appleton	1959	2007	1825	1919	3151
Green Bay	1819	1885	1770	1788	2973
CENTRAL					
Big Flats	2028	2026	2014	1963	3240
Hancock	2018	2037	1860	1956	3223
Port Edwards	1916	1926	1981	1905	3088
WEST CENTRAL					
LaCrosse	2225	2176	2219	2090	3505
Eau Claire	2064	2080	1987	1984	3268
NORTHWEST					
Cumberland	1835	1935	1872	1870	2950
Bayfield	1408	1458	1365	1473	2398
NORTH CENTRAL					
Wausau	1786	1783	1860	1853	2911
Medford	1683	1776	1774	1753	2774
NORTHEAST					
Crivitz	1714	1778	1714	1716	2830
Crandon	1620	1714	1662	1651	2682



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.

LOOKING AHEAD

A brief forecast of pest-related events growers can anticipate in the upcoming week

Apple maggot – Recent rains may contribute to the emergence of higher than normal numbers of apple maggot flies. Growers should monitor closely until harvest.

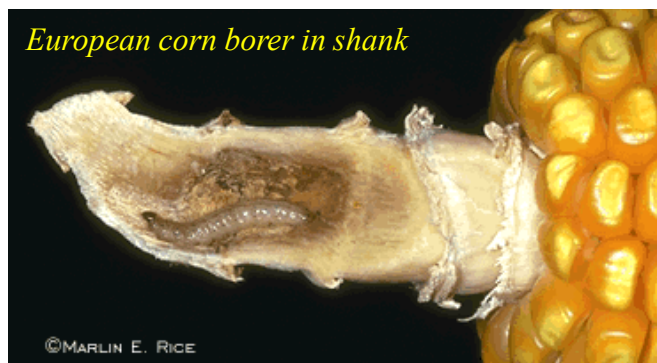
Corn earworm – Moth flight is underway and sweet corn growers should be wary of late infestations.

Corn rootworm – Beetle counts exceed economic levels in several south central corn fields. Growers are encouraged to scout fields once more prior to harvest to determine the need for control next spring.

was detected. The most damaging result of shank tunneling (pictured below), is of course, ear drop. A seed corn inspector reported observing several heavy infestations in Adams Co. fields, where he observed both adults and second instar larvae.



Corn rootworm larva



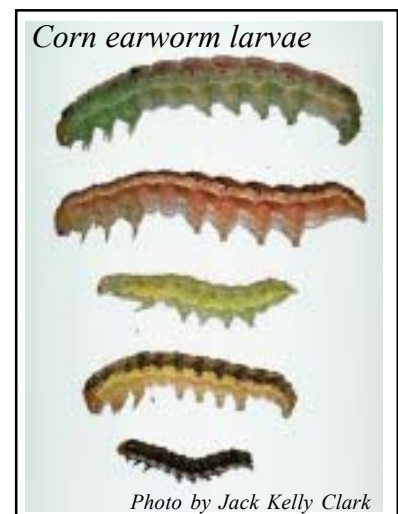
European corn borer in shank

Corn rootworm – Numbers of beetles per plant exceeded economic levels in a majority of the fields surveyed in Dane, Columbia and Dodge Cos. earlier this week. Observations made since the emergence of adults during the first week in July suggest that this season’s population is high, at least in the southern region of the state. Many growers may want to consider applying a soil insecticide before or at planting next spring to prevent larval injury to corn roots next season. As a reminder, corn rootworm is not typically problematic in fields where any crop other than corn was grown in the previous year; therefore, rotating to a crop other than corn is another effective way for growers who experienced heavy corn rootworm populations (*in excess of 0.75 per plant*) this season to avoid problems next year.

CORN

European corn borer – Several grain corn fields in the south central counties have 18%- 91% of the plants infested with either eggs or early instar larvae. Infestations in a number of Columbia Co. fields were nearing economic levels, averaging 60%, and in two of the fields surveyed, 10% stalk breakage was observed. Second-generation larvae were observed feeding in corn ears and shanks, and some stalk tunneling

Corn earworm – Counts in pheromone traps indicate that a significant emergence of moths occurred last week, and that the major moth flight is underway. Sweet corn producers should be wary of late-season infestations since late-planted sweet corn in the silk stage is highly vulnerable to infestation. Pheromone trap counts were: Coon Valley, Vernon Co.-87, Oakfield, Fond du Lac Co.-421, Chippewa Falls, Chippewa Co.-102.



Corn earworm larvae

Photo by Jack Kelly Clark



Corn earworm adult

Photo by Jack Kelly Clark

Corn diseases- Observations in seed corn production fields around the state has rounded up most of the usual suspects, with a few notable exceptions. Levels of leaf blights remain

very low across the state. **Common rust, northern corn leaf spot**, and **northern corn leaf blight** are fairly widespread, while **gray leaf spot** is present at low levels in the southwest. Notably inconspicuous is eyespot, which has been an emerging disease over the last few years. No **Stewart's wilt** has been confirmed in the state yet this year, despite widespread presence of the **corn flea beetle**.

FORAGES

Potato leafhopper – Counts in regrowth alfalfa averaged 1.2 adults and nymphs per sweep this week. Non-economic numbers of adults and a general decline in the proportion of small nymphs suggests reproduction is gradually slowing. Very little hopperburn was evident in 8-10" regrowth alfalfa in the south central district. Still, growers should continue to scout for this species.

Alfalfa caterpillar – Counts in the south are low, but remain as high as 7 larvae per sweep farther north in Portage, Waupaca and Shawano Co. fields. In several of the fields surveyed late last week, substantial defoliation was noted. The average count was 2.7 larvae per sweep. Mostly late-instar larvae were collected.



Alfalfa plant bug – Adult and nymph populations were variable in south central alfalfa fields, but counts seldom exceeded 3 to 5 per sweep. Reproduction appears to be slowing and plant bugs are not expected to be an issue during the remainder of the season.

SOYBEANS

Soybean aphid - No fields warranting treatment for this pest were encountered in Columbia, Dodge or Dane Cos. this week. None of the fields surveyed had counts exceeding 100 aphids per plant; in most cases, the number was much lower (<60 per plant).

Early in August we received some reports of fields saturated with aphids in the southern portion of the state, but these reports were few and far between. In general, it appears that soybean aphid populations this season did not reach the economically important levels they had reached during the two preceding summers. Some suggest the hot, dry weather we experienced early on may have been a factor, or that

Alfalfa plant bug



Photo by Scott Bauer

Image Number K7865-1 ARS Image Gallery

natural enemies played a larger role this year. Although it seems unlikely, some areas could still see a surge in numbers before the end of the season, but it is not clear if, when, or where this might occur.

Viruses—Virus symptoms are appearing in soybean fields throughout the state. Several different viruses cause similar symptoms in soybeans, and infection of a single plant by several viruses is common. Research at UW and elsewhere is underway to determine the contributors to viral disease in soybeans. Viruses under study include **soybean mosaic virus (SMV)**, **alfalfa mosaic virus (AMV)**, **cucumber mosaic virus (CMV)** and **tobacco streak virus (TSV)**.

Indications of viral infection include puckering, twisting and distortion of leaves. These symptoms are similar to those caused by herbicide damage. To help distinguish between the two: soybean leaves with dicamba damage generally cup up, while leaves with virus symptoms generally cup down. Herbicide damage often follows a pattern in the field, and plants with herbicide damage will often grow out of the symptoms.

A phenomenon observed in occasional soybean fields around the state this year involves severe cupping of soybean leaves. This phenomenon causes dramatic cupping of leaves, and differs from virus symptoms in the severity of the damage and the fact that all the plants in a field will show the damage, and differs from herbicide damage in that there

are no patterns and plants don't seem to grow out of it. The current theory is that there is a genetic component to the disorder. Research is underway.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Adana tip moth- Damage was noted in a seedling bed of Austrian pine in Adams Co. Damage was consistent with this pest of Scotch, Austrian and red pine.

Aphids- Found at nursery growers in Dane, Kewaunee and Manitowoc Cos. on river birch, purpleleaf plum and thornless cockspur hawthorn in light to heavy amounts.

Ash flower gall- Galls on white ash in moderate amounts in Washington Co.

Ash plant bug- Found on green ash in trace to moderate amounts in Dane, Manitowoc and Waukesha Cos. Nymphs were noted in Dane Co.

Birch leaf miner- Damage found on river birch in Kewaunee Co. in light amounts.

Bronze birch borer- Found on white birch in Polk Co. in light amounts.

Cutworms- Light damage found in Richland Co. on hosta

Dagger Moth- royal red maple and Norway maple were harboring these caterpillars in Dane and Manitowoc Cos.

Eastern spruce gall adelgids- Galls found on Black Hills spruce in light amounts in St. Croix Co.

Eriophyid mites- Damage on purple cone flower caused by these mites was found in Richland Co. in light amounts.

Fall webworm- These gregarious caterpillars were habiting thornless cockspur hawthorn in heavy amounts in Dane Co.

Flea beetle- Found on flowering kale, helenium, monardia and obedient plant in Manitowoc and Washington Cos. in trace to heavy amounts.

Helmet beetle- Damage found on golden potato vine in moderate amounts in Richland Co.

Leaf curling aphid- Found on ash in light amounts in Dane, Manitowoc and Washington Cos.

Japanese beetle- Defoliation is occurring in Wood and Dane Cos. (DNR)

Leafhoppers- Light to moderate damage found on daylilies, honeylocust, Siberian peashrub, red maple, Freemanii maple and Norway maple in Dane, Iowa, Manitowoc, Richland, St.

Croix, Washington and Waukesha Cos.

Leaf miner- Light damage found on ligularia in Richland Co.

Needleminer- Found in spruce in trace amounts in Adams Co.

Nipple gall- On hackberry in moderate amounts in Dane Co.

Oak leaf miner- Found on swamp white oak in light amounts in Dane Co.

Pine bark adelgids- Found in scattered white pine in a field in Adams Co. in light amounts.

Plant bug- Feeding on garden mums, turtlehead, liatris and primrose in Bayfield, St. Croix and Washington Cos.

Poplar gall saperda- Heavy damage on many poplar trees was noted in Dane Co.

Red headed flea beetle- Damage found in Dane Co. on many types of weigela in light to moderate amounts.

Red headed pine sawfly- Found in Sawyer Co. on pine in light amounts.

Red spider mite- Found on white spruce in light amounts in Dane Co.

Red pine cone beetle- Damage found on Austrian pines in Dane Co. Larva had emerged, but damage was still evident by the tip death on the trees.

Rose sawfly- Found on roses in light amounts in Lincoln Co.

Shoot tip borer- On nannyberry viburnum in light amounts in Dane Co.

Slugs- On hosta in light to moderate amounts of damage in Kewaunee, Washington and Waukesha Cos.

Spider mites- Damage occurring on daylilies, butterfly weed, lobelia, bur oak, Autumn blaze maple, purple cone flower and columbine in light to heavy amounts in Bayfield, Dane Manitowoc, Sauk and Washington Cos.

Spotted tentiform leafminer- On crabapples in trace amounts in Dane Co.

Spruce gall midge (*Mayetiola piceae*)- Damage found on white spruce in Barron and Marathon Cos. Damage from this mite occurs at the tips of the branches and causes a swelling of the tissue to the thickness of a pencil or a little more and can be 3-4 inches long.

Swamp milkweed leaf beetle- Found on swamp milkweed in

light amounts in St. Croix Co.

Thrips- Found doing light damage on balloon flower and black-eyed susan in Bayfield and Washington Cos.

White pine weevil- Damage found on white pine and spruce in Adams Co. in light amounts.

Yellow necked caterpillars- Larvae in St. Croix Co. were about one inch long and feeding on littleleaf linden.

Zimmerman pine moth- Found on Austrian pine in light amounts in Dane Co.

Apple scab- Light to moderate on fruit apple trees and crabapples in Dane, Manitowoc, Sauk, Washington and Waukesha Cos.

Alternaria leaf spot- On garden mums and dahlias in light amounts in Racine and Sauk Cos.

Anthraxnose- Found on daylilies, bergenia, river birch, green ash, autumn purple ash and swamp white oak in light amounts in Clark, Dane, Eau Claire, Iowa, Manitowoc and Waukesha Co. **(DNR in part)**

Asteroma leaf spot- Found on American linden in light to moderate amounts in Dane and Richland Cos.

Bacterial leaf spot- On coral bells and purple cone flower in light to heavy amounts in Sauk and Washington Cos.

Black spot- Found on roses in light to heavy amounts in Kewaunee, Lincoln, Washington and Waukesha Cos.

Botrytis- Found on dahlias, columbine, lilies, geraniums, peony and hydrangea in light to moderate amounts in Dane, Sauk and Waupaca Cos.

Cedar apple rust- On fruit apple trees and hawthorns in light to moderate amounts in Richland Co.

Crown rot- Found on primula in local moderate amounts in Waukesha Co.

Didymellina leaf spot- Found on iris in light amounts in Richland Co.

Downy mildew- Found on English walnut in moderate amounts in Manitowoc Co.

Endosporium leaf spot- Found on hedge cotoneaster in moderate amounts in Waukesha Co.

Guinardia leaf blotch- On horsechestnut in Dane and Kewaunee Cos. in light to moderate amounts.

Insolibasidium leaf blight- Found on honeysuckle doing light amounts of damage in Dane Co.

INSV (impatien necrotic spot virus)- Found on an impatiens basket in Waukesha Co.

Leaf streak- On daylilies in light to moderate amounts in Iowa Co.

Lirula macrospora- Found on white spruce in light amounts in Lincoln Co.

Mystery spruce disease- Found on Colorado spruce in light amounts in Dane and Washington Cos.

Pestalotiopsis- On arborvitae in Kewaunee and Washington Cos. in trace to light amounts.

Phyllosticta leaf spot- Found on amur, Autumn blaze, three flowered, and Japanese maple in light to moderate amounts in Kewaunee and Manitowoc Cos.

Powdery mildew- Found on phlox, dahlia, lily, lupine, bergamot, black-eyed susan, coreopsis, bur oak, Charles Joly lilac, ironwood and white oak in light to moderate amounts in Dane, Kewaunee, Manitowoc, Richland, Sauk, Washington and Waukesha Cos.

Pythium- Identified by the DATCP lab on a red oak from Lincoln Co.

Quince rust- On thornless cockspur hawthorn in light to moderate amounts in Dane and Washington Cos.

Red spot- On peonies in light to moderate amounts in Kewaunee, Sauk, Washington and Waupaca Cos.

Rhizosphaera needlecast- Found on spruce in light to heavy amounts in a field in Adams Co.

Root rot- In a bed of fraser fir in Marathon Co. causing light to moderate damage.

Septoria leaf spot- Found on variegated and red twig dogwood as well as red cardinal lobelia in light to heavy amounts in Manitowoc, Richland, St. Croix and Waukesha Cos.

Shot hole disease- On Canada red chokecherry and purple leaf plum in light amounts in Dane, Manitowoc and Richland Cos.

Sphaeropsis shoot blight- Colorado blue spruce Christmas trees in Eau Claire Co. had this common fungal disease.

Swiss needlecast- Found on Douglas fir in Wahsington Co. doing moderate damage.

Tar spot- Found on silver maple and Autumn blaze maple in light amount in Dane, Kewaunee, Manitowoc, St. Croix and Washington Cos.

Verticillium wilt- Identified from a lab sample from Lincoln Co.

White pine blister rust- Found on white pine in trace to light amount in Adams, Lincoln and St. Croix Cos.

STATE/ FEDERAL PROGRAMS

Gypsy moth trapping program - Trappers are nearly done checking traps north of State Highway 10 and takedown has begun south of State Highway 10. Trap checking in the north should be complete next week while southern takedown will continue for another 4 weeks. Takedown may start in some counties that are south of State Highway 64 next week.

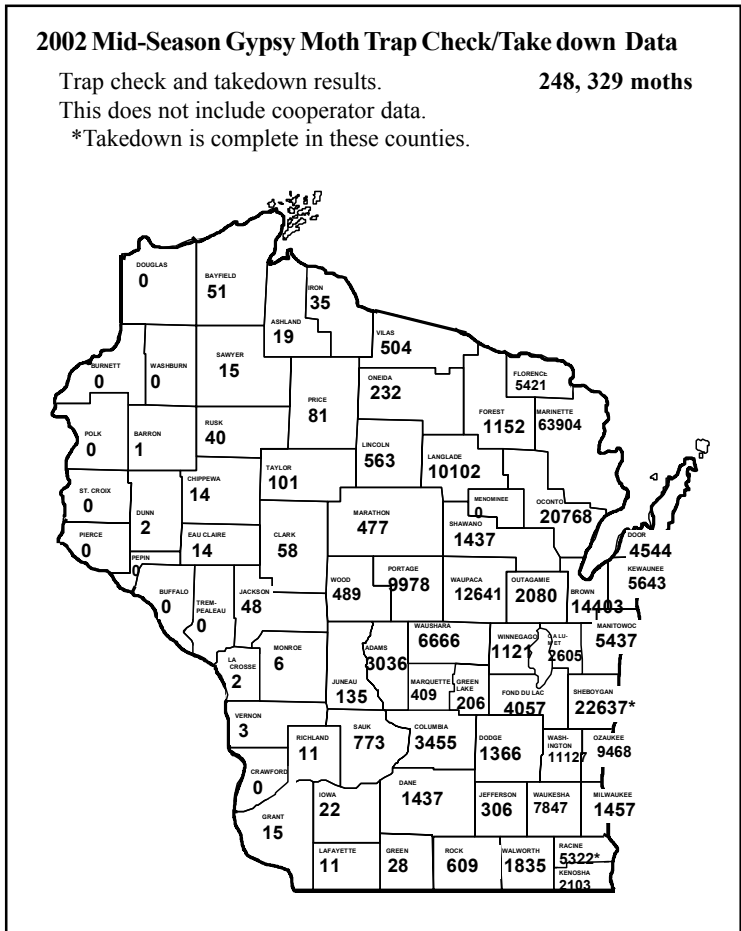
As of 8/21/02, trappers have caught 248,329 male gypsy moths. Two counties are complete, Racine (5,322) and Sheboygan (22,637). Other counties with high catches so far include: Brown (14, 403), Langlade (10,102), Marinette (63,904), Oconto (20,768), Washington (11,127), and Waupaca (12,641).

Ten western counties have reported no catches and they are: Buffalo, Burnett, Crawford, Douglas, Pepin, Pierce, Polk, St. Croix, Trempealeau, and Washburn.

For more information on the gypsy moth trapping program, please call our hotline at 1-800-642-MOTH or visit our website at <http://datcp.state.wi.us> and type 'gypsy moth' in the search box.

FRUIT

Apple maggot – Growers are encouraged to remain watchful of apple maggot activity until harvest. Recent rains may bring about a higher than normal emergence of flies later this month or early in September.



BLACKLIGHT TRAPPING RESULTS									
through August 21									
Trap Site	Euro. Corn Borer	Army- Worm	Black Cutworm	Vari. Cutworm	Spot. Cutworm	Celery Looper	Forage Looper	Corn Earworm	Corn Earworm Pheromone
Southeast									
Sturtevant	286								
Sturtevant through 8-15	16								
South Central									
Arlington ² thru 8-16	550								
Mazomanie	99	25	4	0	2	16	12	32	
Janesville	127	29	1	0	0	33	126	24	
Reedsburg	107								
West Central									
Coon Valley									87
Manitowoc	2	7	0	0	11	3	0	0	
East Central									
Oakfield	79							41	421
Central									
Marshfield	29	10	1		13			32	
Northwest									
Chippewa	44								102
Chetek through 8-15	34								
New Richmond through 8	1					6		5	1076
St. Croix Falls through 8-15									288

APPLE INSECT TRAPPING RESULTS								
County	City	Date	STLM	RBLR	CM	OBLR	AM <i>red ball</i>	AM <i>sticky</i>
Crawford Co.								
Gays Mills-W2		8/12-8/19	30	2	0	1	0	0
Richland Co.								
Hill Point		8/13-8/20	186	4	0	4	1	0
		8/6-8/13					0.4	
Dane Co.								
Deerfield		8/13-8/20	286	28	2	1	0	0
Pierce Co.								
Spring Valley		8/14-8/21	79	7	0	3	0	0
Trempealeau Co.								
Galesville		8/12-8/19	0	0	16	0	0	0
Fond du Lac Co.								
Rosendale		8/12-8/19	76	32	3	1	0	0
Adams Co.								
Oxford		8/12-8/19	246	45	2	5	2	0
Marquette Co								
Montello		8/12-8/19	190	38	5	8	0	0
Racine Co.								
Rochester		8/15-8/22	395	17	5.25	0	0.08	0
Brown Co.								
Oneida		8/12-8/19	200	1	2	4	1	0

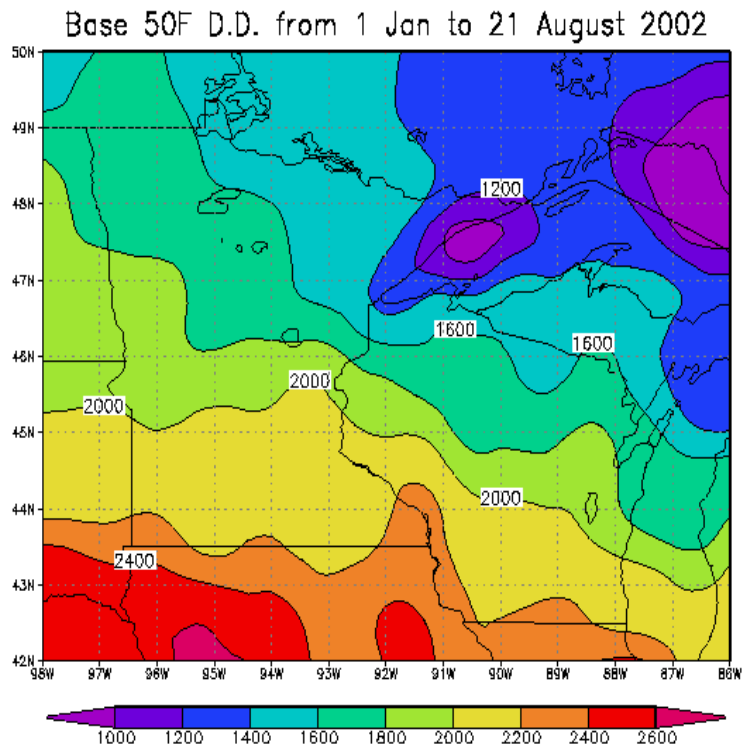
Website of the Week:

ATTRA—Appropriate Technology Transfer for Rural Areas

<http://www.attra.org/>

ATTRA provides technical assistance to farmers, Extension agents, market gardeners, agricultural researchers, and other ag professionals in all 50 states. Topics addressed by ATTRA can be categorized into three broad areas: sustainable farming production practices; alternative crop and livestock enterprises; and innovative marketing .

Technical assistance, publications, and resources are provided free of charge to appropriate users. ATTRA is funded through a cooperative agreement with the USDA Rural Business—Cooperative Service agency.



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