

Weather and Pests

Lack of significant rainfall over the last two weeks has left many of Wisconsin's field crops under stress. Southern and western corn, soybean and alfalfa fields are in dire need of precipitation. In contrast, flooding was expected in the northeast and east central districts earlier this week. The hot, dry weather has been problematic for crops, but has favored the development of many insect species.

(Our apologies, but no Growing Degree Day information was received in time for this issue.)

Looking Ahead

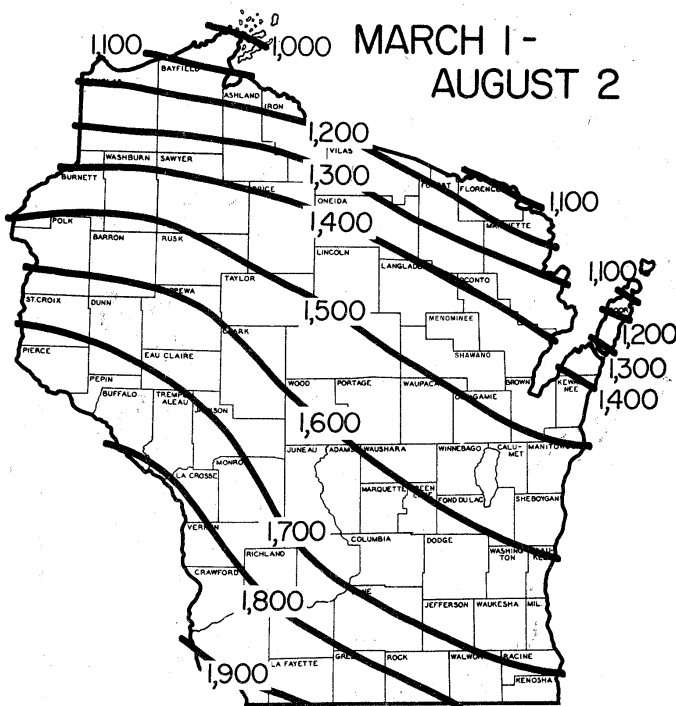
Soybean aphid - The soybean aphid situation is serious throughout much of the southeastern part of the state where populations averaging 1082 aphids per plant are commonplace. Many fields have substantially higher populations, numbering up to 3100 aphids per plant. Plants are beginning to crinkle and turn yellow from aphid feeding. Scout now to determine whether treatment to reduce aphid numbers may be warranted.

Bean leaf beetle - Although the bean leaf beetle hasn't been a major player compared to other soybean pests this season, things could change in the weeks ahead as second generation beetles begin to emerge. Continue to monitor bean leaf beetle activity.

Grasshoppers - Numbers are high enough in some soybean fields to warrant close monitoring. As much as 30% defoliation was observed in a few southeastern soybean fields. Areas with dry soils are particularly susceptible to injury.

Corn rootworm - Emergence of adults continues. Counts are variable throughout the southern districts, but high populations are not uncommon in southern fields. To accurately assess corn rootworm conditions, plan to scout in the week ahead, then two more times at seven to ten day intervals into early September. Control is warranted when an average of 0.75 beetle/plant is detected during any one of the three scouting trips.

European corn borer - Egg laying is underway in the southern and west central districts and is expected to peak around mid- to late August. The most effective treatment window for second generation corn borers, 1550 to 2100 DD (base 50°F), has been reached in the south and west central districts and is rapidly approaching in the central



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

districts.

Potato leafhopper - High populations persist in many southern alfalfa fields and injury is showing up in drought-stressed fields. Current conditions are favorable for nymph production so scouts are encouraged to continue to monitor leafhopper activity in susceptible crops.

Armyworm - Although most infestations are spotty and primarily affect weedy oat and corn fields, continue to scout this week. Outbreak conditions still exist in some northern and eastern fields.

Corn earworm - Low numbers of moths continue to appear in black light and pheromone traps. Some injury is likely to occur in sweet corn as egg laying continues and larval development begins. Scout for larvae in corn ears in the week ahead. Expect moth activity to peak as degree day accumulations approach 1550 (base 55°F).

Gypsy moth flight-People living or visiting areas in eastern Wisconsin who were inundated by gypsy moth caterpillars in June and July can expect to see clouds of moths in the next few weeks. According to experts with the Wisconsin Cooperative Gypsy Moth Program, there is little that can be done at this time.

"Bug 'zappers' won't work because the males fly during the day and the females do not fly at all," says Andrea Diss, gypsy moth suppression team coordinator with the state Department of Natural Resources. She notes that the moths can be a nuisance but insecticide treatments are typically of little use.

"The males will fly away from treated areas and then back to your property again. It's a waste of money because the moths will die within a week in any event."

During the short time they are alive the male and female gypsy moth must find a mate and reproduce. Males track down females by following a scent called a pheromone that the female releases. The female then lays a fuzzy brown "egg mass" that will later hatch hundreds of caterpillars.

Property owners should learn to identify the egg masses and watch for them to appear on trees, siding, wood piles, vehicles or other outdoor equipment. Once the egg masses are visible, they can be sprayed with insecticidal oil such as Golden Pest Spray Oil, or removed from the surface and killed by microwaving or immersing in soapy water for 2 days. (DNR)

Forages

Potato leafhopper - Counts are variable in alfalfa and soybeans but range as high as 15 per sweep with nymphs predominating. Many acres of third crop hay across the state are showing the yellowing symptoms associated with leafhopper feeding, prompting growers to spray. Recent weather has been particularly favorable to leafhopper

development so continue to scout in upcoming weeks.

Corn

European corn borer - Egg laying began at advanced southern sites by July 25. Eggs should turn up in the central counties this week and hatch can be anticipated where 1550 DD (base 50°F) have accumulated. Second generation moths are common in corn fields with dense weed growth. Pupae, 4th and some 5th instar larvae are also still being detected, indicating that a large and possibly prolonged flight of moths may occur yet this season. Close monitoring of susceptible crops should begin this week. Peak flight of summer moths is expected at 1733 DD.

Corn rootworm - Adults are numerous in many corn fields, with counts of three to four beetles per plant being common in fields in the southern counties. Damage to the silks is not yet widespread, but as beetles begin moving into fields with fresh silks, some injury is likely to occur. Late-planted fields, especially sweet corn, will become increasingly attractive to corn rootworm beetles in the weeks ahead.

Corn earworm - Low numbers of moths continued to appear in black light and pheromone traps this week. The major flight hasn't occurred yet, but is anticipated in the next two weeks.

Soybeans

Soybean aphid - The soybean aphid situation is serious throughout much of the southern part of the state, where populations greater than 1000 aphids per plant are the rule and fields with fewer than 200 aphids per plant are the exception. A total of twenty five sites were surveyed in Milwaukee, Ozaukee, Racine, Washington and Waukesha Cos. this week. The highest per plant count was 3100 and the lowest was 89. The average between the southeastern counties was 1082 aphids per infested plant. Fourteen fields were surveyed in Columbia Co. where the average was 725 aphids per infested plant. Several Iowa Co. fields were surveyed as well, and although all had 100% infestations, no fields had plants with more than 400 aphids. A majority of the southeastern soybean fields are in the R3 or R4 stages of growth, and aphid populations are expected to peak soon. Reports from the northeast are somewhat more encouraging, suggesting that counts are not nearly as high there. Fields in Brown and Oconto Cos. had infestations ranging from 23% to 100%, but most plant had fewer than 25 aphids. Some of the heavily infested southern fields may benefit from an insecticide application now. It may be too late for control in fields that are already exhibiting symptoms associated with soybean aphid feeding. The most effective treatment period is passing in the south, but northern and central fields may

still have a chance.

Bean leaf beetle - Contrary to earlier forecasts, the bean leaf beetle hasn't been a major player compared to other soybean pests this season; however, that could change in the weeks ahead as second generation beetles begin to emerge. Second generation adults seek moisture from the succulent pods when plants begin to yellow and dry. While pod feeding does little direct economic damage, it leaves surface lesions that make pods more susceptible to secondary infections. We were fortunate enough to see little defoliation from the overwintered and first generation beetles, but the second generation is just getting started. Don't dismiss the potential for bean leaf beetle problems as beans begin to dry, and continue to scout for bean leaf beetle defoliation and pod feeding in the weeks ahead.

Grasshoppers - Nymphs are maturing rapidly and consuming up to 30% of soybean foliage in some southeastern fields. Injury was heaviest at field margins, but defoliation was observed in field interiors as well. The nymphs noted were the redlegged species, *Melanoplus femurrubrum*. Defoliation attributed to grasshopper feeding was far more extensive than defoliation from bean leaf beetles, **Japanese beetle**, or any other soybean defoliators. Grasshopper control is justified when defoliation reaches 30% prior to bloom, or 20% between bloom and pod fill.

Potatoes

There is still no **late blight** reported anywhere in the state. Severity values crept upward over the past week for most locations, but we are still running substantially behind last year. Last year we had recorded 136 severity values at Plover vs. 13 this year. In short, weather conditions have not been favorable for the development of late blight. With at least a month to go for most fields, growers should still be using a preventative program to maintain protection should weather conditions change to favor the development and spread of late blight.

Early blight continues to progress in central WI. We are beginning our field surveys to collect early blight lesions and to process the isolates of the early blight pathogen for sensitivity to azoxystrobin fungicide. This is the third year of the survey. Testing of isolates from last year has shown a small shift in isolate sensitivity compared with isolates collected in 1998 prior to azoxystrobin use. At the moment we are not overly concerned with the shift, but the data tell us that the industry has to be very careful in how they manage the use of strobilurin chemistries such as Quadris, Headline and Gem. We continue to advise the use of up to three strobilurin sprays beginning at 300 P-Days alternated with a broad spectrum protectant such as chlorothalonil, mancozeb or metiram and then the

protectants for the remainder of the season. It also seems prudent to tank mix the protectants with the strobilurin applications as extra insurance against the selection of fungicide tolerant strains of the early blight fungus. Tank mixes of mancozeb or chlorothalonil with TPTH (triphenyltin hydroxide) are also useful protectant mixtures effective on early blight.

During the past week, reports of **bacterial stem rot** continue to trickle in. The cool weather we've experienced over the course of the season has contributed to dense plant canopies. The abundant foliage tends to trap moisture and establish a microenvironment favorable to bacterial soft rot. Treating with copper sprays at this point after bacterial stem rot symptoms have appeared is probably a waste of money, but in later planted fields where the rows are just closing, perhaps the copper sprays may offer some relief. (UW-Madison)

Vegetables

White mold on snap beans- The cool nights with dew coupled with periodic showers and irrigation are all factors favorable for the development of white mold. So far, white mold incidence has been low to nonexistent. However, growers and field personnel need to be alert to changing conditions and consider fungicide sprays timed with the opening of the blossoms since this is the most susceptible period for plant infection.

Forest, Shade Trees, Ornamentals and Turf

A woolly ash aphid- This aphid, *Prociphilus americanus*, was found on green ash at nurseries in Ozaukee and Jefferson Co. This aphid differs from the ash leaf folding aphid in that great amounts of woolly material are produced. Further, this woolly aphid apparently alternates between ash leaves and the roots of fir (*Abies* sp.).

Banded ash clearwing - One ash tree was found infested with this trunk borer at a nursery in Fond du Lac Co.

Fourlined plant bug - Moderate amounts of injury were

Current P-Day and Severity Value Accumulations for 2003 (http://www.plantpath.wisc.edu/wivegdis/index.htm)			
Location	Calculation Date	P-Day Total	Severity Value Total
Antigo emerging June 4	7/30	411	30
Antigo emerging June 14	7/30	341	12
Antigo emerging June 24	7/30	270	12
Grand Marsh emerging 5/19	7/30	507	41
Grand Marsh emerging 5/24	7/30	484	41
Grand Marsh emerging 5/28	7/30	461	41
Hancock emerging 5/13	7/30	557	25
Hancock emerging 5/17	7/30	534	25
Hancock emerging 5/25	7/30	487	23
Plover emerging 5/13	7/30	559	13
Plover emerging 5/24	7/30	499	13
Plover emerging 6/3	7/30	436	13

noticed on hydrangea, winterberry, ninebark and weigela at several nurseries in St. Croix Co.

Gall midge - A leaf gall caused by the cecidomyiid *Dasineura aceris* was found on silver maple at a nursery in Fond du Lac Co. Damage from this midge usually occurs on expanding leaves. The leaves become distorted and crumpled. There may be several overlapping generations each summer.

Leafhoppers - Moderate amounts of damage were being found on red, Norway and amur maple at nurseries in Fond du Lac and St. Croix Cos.

Mealybugs - Large numbers of mealybugs were found on jasmine at a nursery in St. Croix Co.

Pearleaf blister mite - Damage on an unknown variety of pear was evident at a nursery in Brown Co. Pearleaf blister mite, *Eriophyes pyri*, is a common pest of pear foliage. As the mite feeds on the undersurface of the leaf, the leaf surface ruptures and the mites enter the leaf and lay eggs. Populations can build to where the entire leaf may be affected. As they continue feeding, pimple-like structures form on the upper surface, hence the term blister mite. The mites overwinter under bud scales and migrate to the leaves in the spring.

Spider mites - Damage from spider mites was moderate to heavy on amelanchier, maple and oak at a nursery in Fond du Lac Co.

Spiny rose gall - This insect gall, caused by a cynipid wasp (*Diplolepis bicolor*) was found in an ornamental rose planting in Clark Co. The galls are usually found in clusters of two to ten on the twigs. Control is best achieved by pruning out the galls. Since the wasp overwinters in the galls, you can wait until all the leaves have fallen to prune out the affected twigs. Insecticidal treatments are not recommended.

Viburnum crown borer - A moderate infestation was found on *Viburnum trilobum* at a nursery in Ozaukee Co. Infested shrubs were already showing fall coloration, a key indicator for this pest. Also look for later leafing out in spring. Evidence of this insect includes small piles of sawdust-like material at the crown of the plant where the borer is feeding.

Anthracnose - Severe damage to lupines was being caused by anthracnose at a nursery in St. Croix Co. This disease can be seedborne so it is important to purchase clean seed.

Pestalotia leaf spot - This fungal disease, identified as *Pestalotia rhododendri*, was observed at a Sawyer Co. nursery in moderate amounts. Although a disease of minor importance on rhododendrons, it can also cause twig blight. It is considered a weak pathogen and gains entry through wounds.

Phyllosticta leaf spot - This fungal disease was found in moderate amounts on sugar maple at a nursery in St. Croix Co., and on maples in Fond du Lac Co.

Cedar-quince rust - Twig and fruit infections were very obvious on thornless cockspur hawthorn at nurseries in St. Croix Co. and Fond du lac Cos.

Root rot - Containerized plants sent in to the Plant Industry Lab from nurseries in Jefferson and Sawyer Cos. were tested for the presence of root rot fungi. Most often the fungi present were *Fusarium* and *Pythium* spp. Plants testing positive for root rot included clethra, honeysuckle and peony. Field-grown balsam fir from Ozaukee Co. also tested positive for root rot.

Rust - Hollyhocks at a St. Croix Co. nursery had large amounts of rust infecting the leaves.

State/Federal Programs

Gypsy moth trapping program - Trappers are continuing their mid-season check and have completed 32% of the set total. As of 7/30/03, trappers have caught 11,570 male gypsy moths mainly in the eastern part of the state. No moths have been reported in the northwestern part of the state. Counties with the highest catch are: Florence (1,683), Walworth (1,166), Waukesha (1,893), Waupaca (1,905), and Waushara (1,179). Trap check will continue for two to three weeks and will be completed by mid-August.

For more information on the gypsy moth program, please call our hotline at 1-800-642-MOTH.

Odds -n- Ends

Meadow spittlebug supplants common flea as high-jump champion. - A report by British researchers published in this week's *Nature* says that experiments show the spittle bug can leap more than 2 feet (0.6 meters) in the air. Spittle bugs are common pests of clover and alfalfa. The spittle bug nymph covers itself in white foam for protection while feeding.

The former record, determined in 1910, was almost eight inches and held by the common flea. Using high speed cameras, the new research shows that the spittle bug accelerates with more than 400 times the force of gravity. By comparison, humans are able to jump with a force of 3 Gs. The spittle bug's feat is equal to a man jumping over the Gateway Arch in St. Louis, scientists said. (*Nature*)

Louse flies (*Lynchia americana*) - Adult flies were brought in for identification from Dunn County. The flies were in the bird feathers next to the skin and flew off when the dead bird was disturbed. (DNR)

Woodchuck tick (*Ixodes cookei*) - One specimen was brought in for identification from Eau Claire Co. When it

was found, it was embedded in the individual and promptly removed. (DNR)

Calendar of Events

American Phytopathological Society Annual Meeting

Aug 9-13, 2003. Charlotte, NC

www.apsnet.org/meetings/2003/

WI Christmas Tree Producers Association Summer Convention

Aug. 15-16, 2003

Menominee Casino-Bingo-Hotel, Kesheena

Tour Hanauer's Tree Farms, Shawano

Contact: Cheryl Nicholson, Executive Secretary

www.christmastrees-wi.org

Phone (608)745-5802

West Madison Horticultural Field Day featuring a Mexican Garden

August 16, 2003.

Contact: Judy Reith-Rozelle at West Madison 608-262-2257

Fall Garden Twilight Tour

Aug 27, 2003

Ashland Ag Research Station, Ashland, WI. Begins at 6:30 p.m. For more information contact the Ashland Agricultural Research Station, 68760 State Farm Road, Ashland, WI 54806-9338 at (715) 682-7268 or fax (715) 682-7269.

Twilight Garden Tour

Aug 28, 2003

Spooner Ag Research Station, Spooner, WI. Begins at 6:30 p.m. For more information contact the Spooner Agricultural Research Station, W6646 Highway 70, Spooner, WI 54801 at (715) 635-3735 or Fax (715) 635-6741.

XII World Forestry Congress, A Focus on Forests,

September 21 - 28, 2003

Quebec City, Canada

<http://www.wfc2003.org>

Invasive Alien Species and the International Plant Protection Convention Conference 22-26 September 2003

Braunschweig, Germany

[http://www.ippc.int/IPP/En/Archive/IAS2003/IAS-](http://www.ippc.int/IPP/En/Archive/IAS2003/IAS-WORKSHOP-Home.htm)

[WORKSHOP-Home.htm](http://www.ippc.int/IPP/En/Archive/IAS2003/IAS-WORKSHOP-Home.htm)

Apple Insect Trapping Results

County City	Date	STLM	RBLR	CM	OBLR	AM red ball	AM sticky
Crawford Co.							
Gays Mills-W2	7/21-7/28	75	6	0	0	0	0
Gays Mills-E2	7/24-7/31	330	35	36	2	1	0
Richland Co.							
Hill Point	7/24-7/30	60	4	0.5	0	0.2	0.5
Richland Center -W	7/24-7/31	25	38	0	1	0	0
Richland Center-E	7/24-7/31	56	55	10	0	0	0
Sauk Co.							
Baraboo	7/24-7/31	130	3	0	1	1	0
Dane Co.							
Deerfield	7/20-7/28	197	2	0	0	0	1
Green Co.							
Brodhead	7/23-7/30	9	0	4	1	0	0
Iowa Co.							
Dodgeville	7/24-7/31	335	0	0	0	0	1
Jackson Co.							
Hixton	7/22-7/28	6	0	0	1	0	0
	7/1-7/21	39	0	1	0	0	0
Pierce Co.							
Beldenville	7/23-7/30	55	1	0	0	0	0
Spring Valley	7/27-8/1	170	10	0	0	0	0
	7/18-7/27	95	2	0	0	1	0
Fond du Lac Co.							
Malone	7/24-7/31	20	20	4	1	0	1
Marquette Co							
Montello	7/20-7/27	241	68	5	1	1	0
Door Co.							
Sturgeon Bay	7/23-7/29	540	31	6	5	<1	2
Brown Co.							
Oneida	7/21-7/28	60	6	2	0	2	3
Marinette Co.							
Wausaukee	7/24-7/31	61	17	2	0	0	0
Ozaukee Co.							
Mequon	7/22-7/28	475	4.5	0.8	0.5	1	
Waukesha Co.							
Waukesha	7/19-7/25			0			
Racine Co.							
Rochester	7/25-8/1	652	8	15	0	0.5	0.5
Sheboygan Co.							
Plymouth	7/25-8/1	244	27	3		2	

STLM--Spotted tentiform leaf miner; RBLR--Redbanded leaf roller; CM--Codling moth; OBLR--Oblique banded leaf roller
AM--Apple maggot

Black Light Trapping Results

through July 31

Trap Site	European corn borer	Armyworm	Black Cutworm	Variegated Cutworm	Spotted Cutworm	Celery Looper	Corn Earworm	Dingy Cutworm	Corn Earworm Pheromone
South Central									
Arlington 7/18-7/21	0	10	6						
Madison 7/19-7/24	2	25	36						
Mazomanie	12	18	6	6	8	0	14	0	
Reedsburg	143								
West Central									
Coon Valley									0
Central									
Marshfield	28	6	3	7	3	2	1		
7/17-7/24	3	4	0	9	3	4	2		
East Central									
Manitowoc	11	6						19	
Northwest									
Chippewa Falls	178	1	1	1	1				
New Richmond	6								
Cameron	7								



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Division of Agricultural Resources Management
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Web Site of the Week

Moths of North America

<http://www.npwrc.usgs.gov/resource/distr/lepid/moths/mothsusa.htm>

Some web sites demonstrate a clear understanding of the uses of hypertext, and are able to provide useful information in a clean and accessible format. These Web pages, from the USGS Northern Prairie Wildlife Research Center, are a splendid example. A wealth of information -- distribution maps, photo thumbnails linked to textual descriptions, county records, links to additional resources-- logically arranged and linked. A model site.

Quote of the Week

"Christopher Robin!" he (Pooh) said in a loud whisper.
"Hallo!"

"I think the bees suspect something!"

"What sort of thing?"

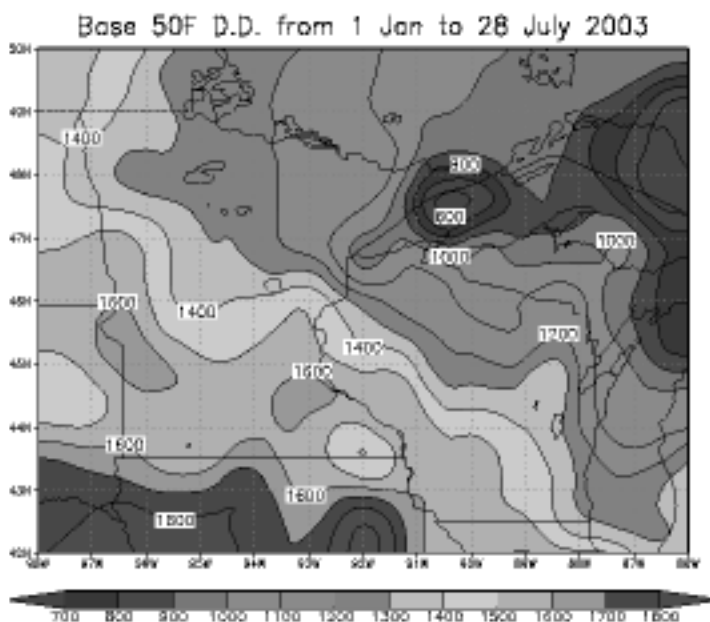
"I don't know. But something tells me that they're suspicious!"

"Perhaps they think that you're after their honey?"

"It may be that. You never can tell with bees."

A. A. Milne (1882 - 1956) "...in which we are introduced to Winnie-the-Pooh and some bees, and the stories begin"

August 1, 2003



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