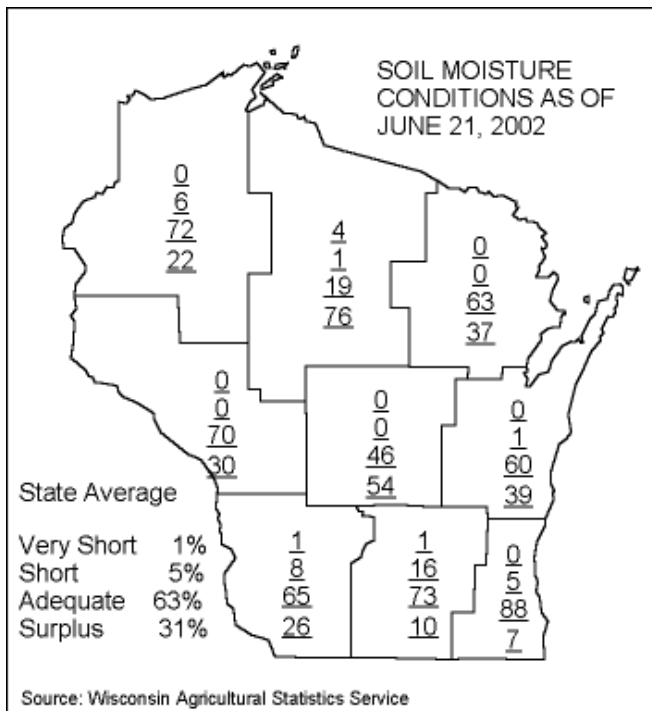


Cooperative Pest Survey Bulletin

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

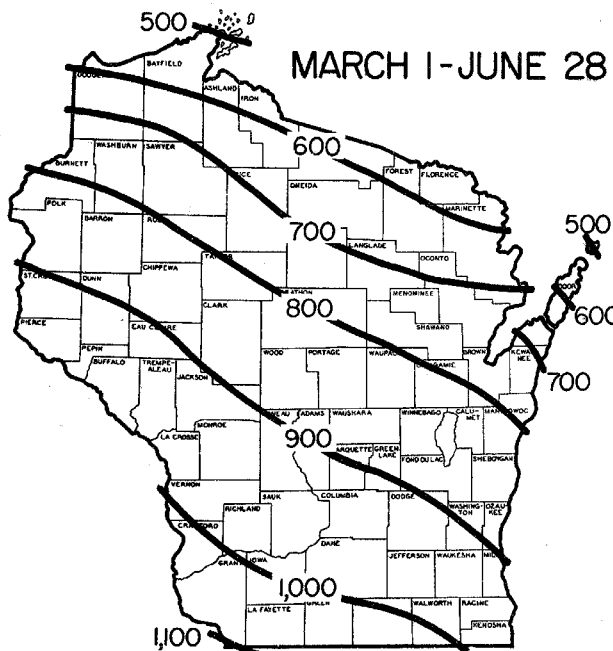


WEATHER AND PESTS

Rain has prevented growers from harvesting hay and treating fields for pests. Hail in Chippewa Co. caused some crop damage, and northern counties are reporting crop yellowing due to the excess moisture.

Growing degree days from March 1 through June 26 were:

Site	GDD*	2001 GDD	Normal GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	971	982	1077	978	1683
Lone Rock	903	903	983	898	1585
SOUTHCENTRAL					
Beloit	943	998	1016	904	1651
Madison	877	904	982	870	1546
Sullivan	895	945	951	858	1584
Juneau	863	927	893	851	1521
SOUTHEAST					
Waukesha	858	883	936	820	1524
Hartford	831	878	893	812	1473
Racine	819	812	934	780	1454
Milwaukee	791	788	910	772	1413
EAST CENTRAL					
Appleton	736	800	797	744	1340
Green Bay	646	721	756	664	1219
CENTRAL					
Big Flats	841	837	895	823	1468
Hancock	826	836	889	833	1446
Port Edwards	773	777	877	776	1365
WEST CENTRAL					
LaCrosse	950	925	962	921	1629
Eau Claire	826	859	881	817	1439
NORTHWEST					
Cumberland	695	794	823	723	1241
Bayfield	451	564	497	461	892
NORTH CENTRAL					
Wausau	678	715	798	716	1233
Medford	629	713	782	659	1157
NORTHEAST					
Crivitz	586	682	676	613	1121
Crandon	572	702	656	598	1071



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

Potato leafhopper – Populations in alfalfa surveyed this week exceeded the treatment threshold in many second growth fields. Rising nymph populations and subsequent damage to alfalfa are expected to become increasingly apparent in the week ahead.

Pea aphids – Sweep net counts in pea fields may rise to levels exceeding treatment guidelines in the upcoming week. Scout fields for evidence of injury and populations in excess of 100 aphids per sweep.

European corn borer – Continue scouting for egg masses, 1st-2nd instar larvae, and shot-hole feeding. See the **CORN** section for sampling techniques and economic thresholds.

Corn leaf aphid – The low numbers of winged adults observed earlier this week indicate colonies will soon begin building on corn leaves in some developmentally advanced fields throughout the south. Corn leaf aphids injure plants by removing plant sap and introducing **maize dwarf mosaic virus** (MDMV).

CORN

European corn borer- Pinhole feeding and 1st instar larvae were noted on 14-39% of the plants in V8-V9 stage Columbia and Dane Co. corn fields earlier this week. Infested plants had 1-4 larvae per plant. Fresh egg masses are still being detected in a number of Dane Co. fields where counts averaging 4 egg masses per 50 plants were observed.

Evidence suggests some substantial European corn borer infestations are likely to occur this season, especially in the southwest and south central districts. To accurately assess the situation in your area, scouting is essential. Sample 5 sets of 20 plants for every 40-50 acres. In fields exceeding 80 acres, sampling 5 sets of 25 consecutive plants per field is sufficient. Be sure to avoid field edges where infestations are often more severe and not representative of conditions in the entire field.

Treatment for field corn is suggested for 1st generation corn borer when larvae are present and recent foliar

feeding is observed on 50% or more of the plants. Treatment of the 1st generation is most effective when the DD for the season reach 1000-1100 (base 50°F).

In fresh market sweet corn the threshold is based on the number of eggs masses or larvae present. Infestations must be detected early if insecticide applications are to be properly timed to keep developing ears free of corn borer larvae. One egg mass or larva per 10 plants is a commonly used treatment threshold. Apply sprays when the black head stage or newly-hatched eggs are observed. In the event that 1 unhatched egg mass per 10 plants can be detected following the initial treatment, a second application may be warranted.

Brian Flood in Rochelle, Illinois reports, “We are at or above normal levels of 1st generation European corn borer. To date we have had 9 nights over 25+ moths/night with 7 of the 9 nights in excess of 50 moths per night. (Total last week = 394 ECB). The females are “class 2” = freshly mated and both the males and females are in good condition. The sustained long flight with good European corn borer weather will favor the European corn borer. Shot holes will be visible in two weeks when the larvae are 3-4th instars. The average is 13 nights with 5 or more moths per night.”

Stalk borer – Damage to outside rows of corn is evident in many fields in the southern region of the state. In some fields, damage to the outermost row exceeded 44%. Stalk borer larval feeding is characterized by ragged holes in the leaves and “deadheart”, a condition where infested plants have dead or dying inner whorl leaves while the outer ones remain relatively healthy looking. Deadheart occurs when a stalk borer larva enters and feeds within the whorl, and most commonly impacts young corn plants.

As was the case in the fields surveyed this week, **stalk borer** infestations are often localized and spotty, or concentrated in areas of the field with dense weed growth. When this occurs spot treatments are often sufficient for controlling larval populations.

In the event that an insecticide application is warranted, the



Stalk borer damage

A. Genetzky, E. C. Burkness and W. D. Hutchison University of Minnesota Department of Entomology

time to target larvae is during the period of larval movement. Once larvae tunnel inside the stalk, insecticides are no longer effective. The threshold for treating **stalk borer** infestations is when 1/3 or more of the plants show signs of damage.

The University of Nebraska-Lincoln web site, located at <http://www.ianr.unl.edu/pubs/insects/g521.htm#des> contains great pictures of larvae, larval feeding injury, and offers information on sampling techniques and thresholds. Additionally, the WI-MN Cooperative Extension Agricultural Weather Page located at <http://www.soils.wisc.edu/wimnext/corn/stalkborer.html> contains **stalk borer** phenology data. For current Wisconsin recommendation see UW-Extension Bulletin #A3646.

Corn leaf aphid – Low numbers of winged adults are turning up in corn whorls and on corn leaves in many fields surveyed in the south. **Corn leaf aphids**, much like other aphid species, injure plants by removing plant sap and introducing disease. Additionally, they secrete “honey dew”, a sticky substance that provides a medium for the growth of

sooty mold. Plants plagued by dense **corn leaf aphid** populations may take on a black or sooty appearance as mold begins to develop on the honeydew secretions.

The effects of **corn leaf aphid** infestations are often heightened during periods of dry weather. Dry weather not only favors aphid population growth, but also prevents the development of the fungal pathogens that ordinarily keep **corn leaf aphid** populations under control. In contrast, heavy rains can help reduce aphid populations and provide favorable conditions for the development of these fungal diseases.

Heavy corn leaf aphid infestations do not typically occur until close to tassel emergence, and despite large numbers of aphids, they generally don't cause economic losses. Further, populations often decline rapidly after tassel emergence due natural enemies, and the migration of winged aphids to other hosts.

SMALL GRAINS

Red leaf of oats - Some heavy infections were observed in later-planted oats in the Waunakee and Dane areas of northern Dane Co. The earliest planted fields seemed to be little affected.

FORAGES

Potato leafhopper – Both adults and nymphs were



R. Bessin University of Kentucky

observed in several Dane and Columbia Co. fields with counts exceeding the economic threshold for potato leafhopper. Nymph populations are still relatively low, but the hot, dry conditions ahead are likely to favor leafhopper reproduction and development. Very little **hopperburn** was observed again this week (5-14%), even in fields with above-threshold counts, but despite these observations, alfalfa producers throughout the state should continue to scout for symptoms of potato leafhopper injury.

Alfalfa weevil – Very low populations of large, mature alfalfa weevil larvae were found second crop alfalfa in the south central region of the state. Rates of 5-20% tip feeding were noted in 6-8" regrowth. For the time being, larval populations appear to be insignificant.

Pea aphids – Populations in alfalfa were moderate in a number of Dane and Columbia Co. fields. Populations vary from 12.6 to 33 aphids per sweep. Pea aphid numbers often build substantially in just a short-period of time, so continue to monitor levels in both alfalfa and pea fields in the week ahead.

VEGETABLES

Special Potato Pesticide Registrations offered for public review- Wisconsin potato growers will be better prepared to fight plant diseases through three special pesticide registrations proposed by the Wisconsin Department of Agriculture, Trade and Consumer Protection. The special registrations will allow potato growers to control **early blight** and **late blight** with Bravo WeatherStik, Bravo Ultrex and Bravo Zn. Wisconsin citizens have until July 8 to review and comment on the proposed five-year special pesticide registrations.

The special registration process allows states to register additional uses of pesticide products without prior federal approval, giving states flexibility to meet local needs such as controlling plant diseases or insect outbreaks.

Early blight and late blight are serious potato fungal diseases.

The fungi infect the stems and stolons of the potato plant that results in fewer tubers, reduced crop yields and lowered potato quality. Late blight also has the potential to wipe out entire fields and is the same disease that caused the potato famine in Ireland.

For a copy of the environmental assessment, contact Ed Bergman, P.O. Box 8911, Madison, WI 53708-8911, (608)224-4546 or review the assessment at the department, Mon.-Fri., 7:45 a.m.-4:30 p.m., 2811 Agriculture Dr., Madison, 2nd floor. Comments received on or before 4:30 p.m., Monday, July 8, 2002 will become part of the preliminary environmental assessment record. Send comments to Ed Bergman by mail at the above address, or fax to 608/224-4656, or send an email to ed.bergman@datcp.state.wi.us.

SOYBEANS

Soybean aphid – Currently we're continuing to encounter only low-level infestations in V3-V4 stage fields throughout the south, but populations are building. At West Madison, a 27% infestation with an average of 6 aphids per infested plant was detected this week, while at the Arlington Research Station a 7% infestation with an average of 8 aphids per infested plant was observed. In the Dane Co. fields surveyed between June 24-26, 5-35% infestations with averages of 2.7 to 6 aphids per plant were found. In Columbia Co., the infestation levels ranged from 17.5-25%, with an average of 4.6 to 5.5 aphids per plant

Soybean aphid populations will continue to build during the vegetative stages and can be expected to peak around flowering. The period of most rapid population growth typically begins in the early to mid-bloom stage. At this time, soybean growers are encouraged to scout plants for aphids on the undersides of the youngest trifoliolate, on petioles and the upper portion of the stem.

Bean pod mottle virus- Symptoms caused by Bean pod mottle virus are starting to appear in soybeans in Rock Co. **Bean leaf beetle** activity has been heavy at this site. High air temperatures can result in remission of leaf symptoms but will resume in new growth when air temperatures drop below 90° F. (UW-Madison)

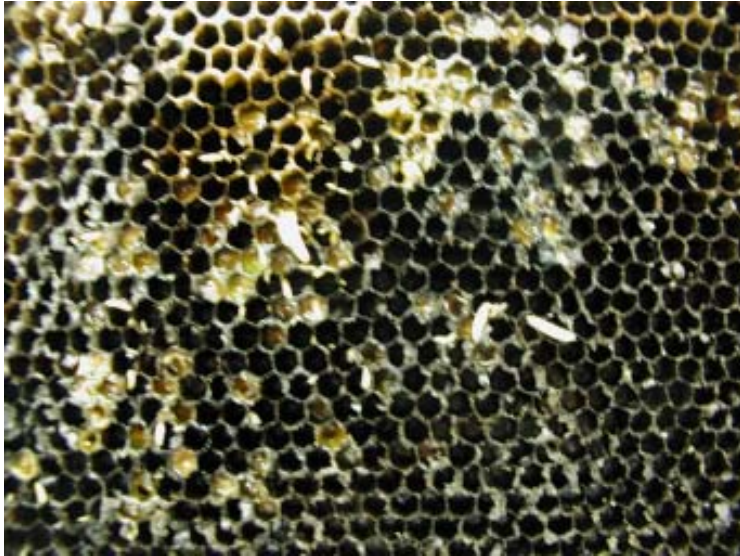
APIARY

Apiary program- Small hive beetle larvae (*Aethina tumida*) were detected in Winnebago Co. About 100 larvae of varying size were found feeding on a frame with left-over honey and pollen in a hive that died out earlier this season. Several adult beetles were collected



Pea aphid

<http://www.ento.okstate.edu/ddd/insects/peaaphid.htm>

Small hive beetle

as well. The infested frame was removed. It gave off a characteristic odor reminiscent of fermenting oranges. Live hives in the same apiary were thriving. The bees had arrived from Florida earlier this month.

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Aphids – Light numbers found on marigolds and crabapples in Sheboygan and Grant Cos.

Birch leafminer – Found in whitespire birch and river birch in light amounts in Dane Co and at a grower in Kenosha Co.

Elm leafminer – Moderate to heavy on regal and accolade elm in Kenosha Co.

Fletcher scale – On densiformis yews at a dealer in Sheboygan Co., and a light amount on spreading yews at a grower in Kenosha Co.

Leaf curling aphid – Found at nursery growers in Lincoln and Grant Cos, on ash in moderate levels.

Leaf galls – Found on silver maple and red ak in light amounts in Kenosha Co at nursery dealers.

Leafhoppers – Found on maple and hawthorn in moderate amounts in Grant and Kenosha Cos.

Leafminer – Heavy on european alder in Kenosha Co.

Needleminer – Trace amounts found at a grower in Kenosha Co.

Spiny witchhazel aphid – On river birch in light amounts at a grower in Kenosha Co.

Spittlebug – On coreopsis in light amounts in Sheboygan Co.

Viburnum crown borer – Moderate damage found at a grower in Kenosha Co. on European and American viburnum. Larva had already emerged.

Viburnum tip borer – Moderate damage is being found on nannyberry viburnum at a grower in Kenosha Co.

Alternaria leaf spot – found on crabapples and apple trees in Grant Co in light to moderate levels.

Anthracnose – Found on autumn purple ash, bur oak and river birch in light levels in Kenosha and Sheboygan Cos.

Apple scab – Crabapples with light amounts of scab found at nursery dealers and growers in Grant, Lincoln, Kenosha and Sheboygan Co.

Bacterial blight – Moderate damage from **bacterial blight** was found at a dealer in Sheboygan Co.

Bacterial leaf spot – Found at a nursery stock in Kenosha and Lincoln Cos. had light to moderate amounts on highbush cranberry viburnum, oakleaf hydrangea and magnolia.

Frost damage “tatters” on American cranberry bush

Black spot – Found in Kenosha Co. on roses which have a moderate infection.

Cedar apple rust – Crabapple and hawthorn with light amounts were found in Grant Co. at a nursery dealer and at a nursery grower in Kenosha Co.

Frost injury - Symptoms similar to oak tatters were observed on American cranberry bush (*Viburnum trilobum*). Puckered and normal shaped leaves with irregular shaped necrotic areas that vary from small spots to large portions of leaves can easily be confused with leaf spot diseases. Leaf edges are often ripped and rows of holes are apparent. Cold May weather caused this injury to young expanding foliage and buds.

Guignardia leaf blotch – Found on horsechestnut in light amounts at a nursery grower in Kenosha Co.

INSV (Impatiens Necrotic Spot Virus) – Found on a small amount of impatiens, coleus and begonias at nursery dealers in Grant and Sheboygan Cos.

Oak leaf blister – Found on red oak at a nursery in Kenosha Co. in light amounts.

Phomopsis tip blight – Found in moderate levels on blue chip juniper in Kenosha Co.

Powdery mildew – On garden phlox in moderate level in a nursery dealer in Kenosha Co.

Phomopsis blight – On Russian olive found at a nursery dealer in Grant Co.

Pseudomonas syringea – Found on impatient and mockorange in Grant, Kenosha, and Sheboygan Cos. In light to moderate levels.

Red Spot – On peonies in light amounts in Sheboygan Co.

Root rot – On peonies and transplants in Grant and Kenosha Cos.

Rose mosaic virus complex – Found on four roses in Sheboygan and Kenosha Cos.

Septoria leafspot – Found in Grant and Kenosha Cos on spirea, dogwood, and dwarf bush honeysuckle in light amounts.

Shot hole disease – Found on cherry in moderate levels in Sheboygan Co.

Venturia tip blight – Noted on aspen in a nursery field in Kenosha Co., causing moderate damage.

STATE/ FEDERAL PROGRAMS

Gypsy moth trapping - Trappers are continuing to set traps statewide. As of 6/26/02, trappers have set 20,756 (77%) of the expected total of 27,000 traps. Thirty counties are now complete and we expect to be done on or about July 5th. Completed counties are: Buffalo, Calumet, Dunn, Florence, Fond du Lac, Green, Green lake, Jackson, Jefferson, Kewaunee, LaCrosse, Lafayette, Lincoln, Manitowoc, Milwaukee, Oconto, Oneida, Outagamie, Pepin, Price, Racine, Rusk, St. Croix, Sheboygan, Taylor, Vernon, Vilas, Walworth, Waukesha, and Waupaca.

Counties that at least 75% complete are: Brown (78%), Burnett (95%), Chippewa (89%), Clark (96%), Crawford (84%), Douglas (79%), Eau Claire (95%), Juneau (96%), Langlade (92%), Marquette (75%), Pierce (81%), Polk (94%), Portage (90%), Rock (78%), Sauk (80%), Trempealeau (93%), Washburn (98%), Washington (94%), Waushara (86%), and Wood (89%).

Trap check is estimated to start in the south around July 17th depending on phenology reports. Trap check in the north will start about 1-2 weeks after. Trap check will take approximately 3 weeks to complete. Trappers do trap maintenance and count gypsy moths in the trap at each tarp location. Traps are replaced if they are missing, full of gypsy moths, or full of debris and can't hold any gypsy moths.

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 in 'gypsy moth' in the search box.

FRUIT

Oblique banded leafroller - The first catch began about a week ago (June 17-21 depending on area) across southern Wisconsin with Walworth Co. a few days ahead of Crawford Co. First instars were seen on June 25 and 26 in the terminals of a number of apple orchards although below the economic threshold of 5% (data from John Aue).

Codling moth - Dissections of apples from an untreated Cortland apple tree in Dane Co. produced zero larvae per 20 fruits.

Apple scab - Hopa crabs in Dane Co. are beginning to defoliate due to infections.

Plantbug – Egg masses of several species were readily observed on the undersides of apple leaves at orchards located in the southwest region of the state. **Plant bugs** are generally not an economic problem in apples (data from John Aue).

White apple leafhopper - Speckled white leaves from **white**

apple leafhopper feeding is noticeable in Richland and Crawford Co. orchards, and on some residential apple trees in Chippewa Co. Damage rarely reaches economic levels; however, in non-bearing, either the **white apple** or the **potato leafhoppers** have been doing some damage, particularly to the growing points (data from John Aue and UWEX)

Green apple aphid - Colonies are sometimes numerous on terminals examined at Richland and Crawford Co. orchards. These colonies are usually accompanied by some **syrphid larvae** or **lacewings**, and again, are not generally an economic problem except perhaps on very young trees (data from John Aue).

Rosy apple aphid - Damage is also evident in some orchards, but by this time, most of the damage has been done and the colonies have been controlled by predators. (data from John Aue).

European red mites – Populations have been growing rapidly with the accumulating degree days (data from John Aue)..

APPLE INSECT TRAPPING RESULTS

County City OBLR	Date	STLM	RBLR	CM	
Grant Co.					
Sinsinawa	6/19-6/26	78	33	6	29
Richland Co.					
Hill Point	6/18-6/24	216	0	3	0
Richland Center-W	6/17-6/24	135	0	10	2
Richland Center-E	6/17-6/24	46	0	0	5
Crawford Co.					
Gays Mills-W2	6/17-6/24	90	0	2	0
Gays Mills-E2	6/17-6/24	73	1	0	8
Dane Co.					
Deerfield	6/17-6/24	640	5	6	2
Green Co.					
Brodhead	6/18-6/25	35	33	0	8
Pierce Co.					
Beldenville	6/8-6/15	3	1	6	
	6/15-6/22	1	0	0	1
Spring Valley	6/12-6/19	6	5	1	0
	6/19-6/26	101	0	0	2
Trempealeau Co.					
Galesville	6/18-6/25	150	1	15	11
Jackson Co.					
Hixton	6/18-6/24	15	0	0	2
Adams Co.					
Oxford	6/17-6/24	610	0	6	8
Marquette Co.					
Montello	6/17-6/24	561	2	18	15
Ozaukee Co.					
Mequon	6/12-6/18	0	0	0.3	
Racine Co.					
Rochester	6/20-6/27	780	10	26	7
Brown Co.					
Oneida	6/16-6/23	0	0	7	1

BLACKLIGHT TRAPPING RESULTS

through June 26

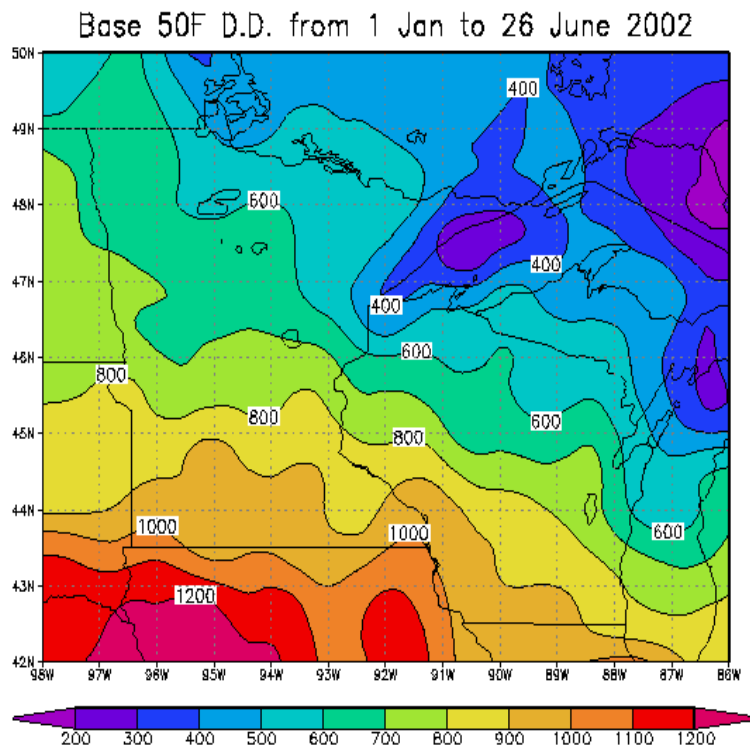
Trap Site	Euro. Corn Borer	Army- Worm	Black Cutworm	Vari. Cutworm	Spot. Cutworm	Celery Looper	Forage Looper	Corn Earworm
South Central								
Arlington ¹ thru Jun	4	2						
Arlington ² thru Jun	79	3						
Madison thru June	12							
Mazomanie	39	22	3	0	4	2	0	0
Janesville	82	48	0	0	3	22	7	0
East Central								
Manitowoc		2			4	2		
Central								
Marshfield	15	21	3	0	14	0	23	13

Website of the Week:

http://ohioline.osu.edu/sc152/sc152_12.html

The Response of Native and Naturalized Trees to Construction Activity

Highlights the affects of construction to urban tree health, including changes in water drainage, soil conditions, light, temperature, and pest susceptibility. Includes a useful table rating the performance and adaptability of many native and naturalized trees to construction.



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