

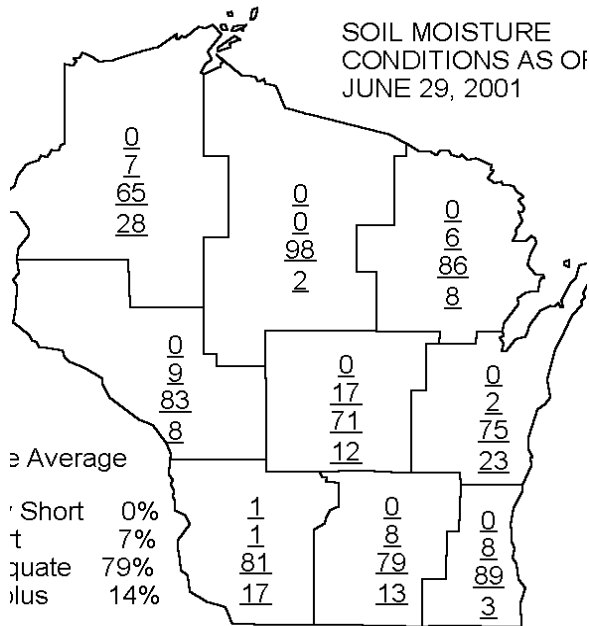


# COOPERATIVE PEST SURVEY BULLETIN

State of Wisconsin  
Department of Agriculture  
Trade & Consumer Protection

Agricultural  
Resource  
Management

BUREAU OF PLANT INDUSTRY P.O. BOX 8911 MADISON, WI 53708-8911  
PHONE: 608-224-4571 FAX: 608-224-4656



Source: Wisconsin Agricultural Statistics Service

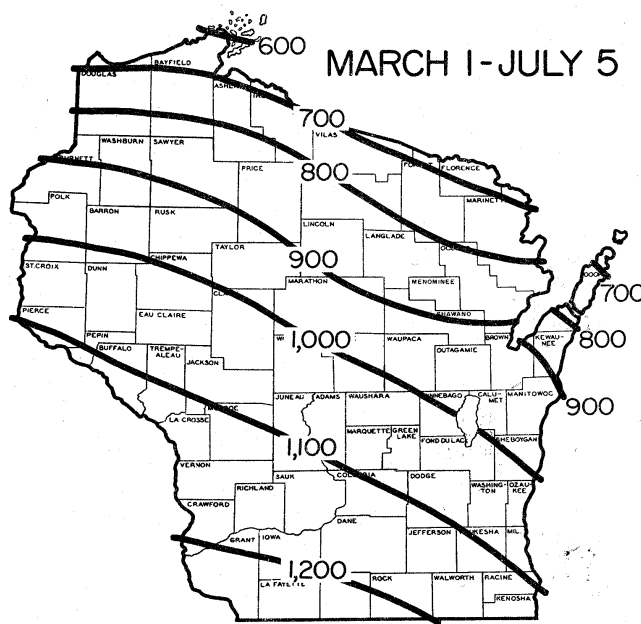
## WEATHER AND PESTS

Finally! A week where growers can get some work done and weeds are cringing. Almost all crops lag behind the average growth for this time of the year, but all responded well to the warm dry conditions. Strawberry harvest continues.

Growing degree days from March 1 through July 4 were:

Site	GDD*1	2000 GDD	Normal GDD	Base <sup>1</sup> 48	Base <sup>1</sup> 40
<b>SOUTHWEST</b>					
Dubuque, IA	1145	1241	1232	1195	1990
Lone Rock	1053	1145	1133	1100	1878
<b>SOUTH CENTRAL</b>					
Beloit	1161	1164	1170	1195	2031
Madison	1061	1078	1127	1121	1886
Sullivan	1107	1085	1090	1129	1962
Juneau	1087	1100	1027	1130	1929
<b>SOUTHEAST</b>					
Waukesha	1042	1057	1074	1094	1872
Hartford	1036	1055	1024	1095	1856
Racine	970	1012	1070	1038	1766
Milwaukee	943	972	1044	1018	1724
<b>EAST CENTRAL</b>					
Appleton	951	977	930	1009	1722
Green Bay	866	888	880	933	1618
<b>CENTRAL</b>					
Big Flats	986	898	1036	994	1756
Hancock	988	1002	1027	999	1758
Port Edwards	920	953	1015	946	1660
<b>WEST CENTRAL</b>					
LaCrosse	1091	1261	1098	1055	1890
Eau Claire	1014	1131	1010	1008	1781
<b>NORTHWEST</b>					
Cumberland	940	944	945	969	1680
Bayfield	675	633	600	687	1278
<b>NORTH CENTRAL</b>					
Wausau	853	877	917	874	1556
Medford	840	858	905	888	1546
<b>NORTHEAST</b>					
Crivitz	822	820	790	860	1542
Crandon	835	800	875	832	1508

\*Data from Bill Bland et. al., Soil Science, Univ. of Wisconsin-Madison.



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.

### ALERTS

**Corn Earworm**—Moths are turning up in blacklight traps. Silking sweet corn is most susceptible. Pheromone traps placed near these fields help predict the need for treatment.

**Daylily rust - Daylily rust** was found in two widely separated parts of Kansas recently. The Kansas State University plant diagnostic clinic identified **rust** from a sample in northeast Kansas. Another sample came in from southwest Kansas. In that incident **rust** was found on 20 of 59 varieties in a homeowner's collection. The infected varieties from that collection are: Caribbean Lisa's Life, Winds of Destiny, Cheddar Cheese, Twist & Shout, Gemstone Warrior, Wedding Band, All American Plum, Caribbean Eye Spy, Merle Kent Memorial, Reinede Violettes, Green Gage, Evening Enchantment, William Austin, Jungle Fever, Virginia Franklin, Alabama Girl, Impetuous Fire, Blue Fantasy, Savage Splendor, and Ruffled Perfection. Some of these varieties were severely rusted. (**Kansas Dept. of Ag**)

**Entomophaga maimaiga** - This gypsy moth killing fungus has now been recovered from gypsy moth caterpillars in Marinette, Shawano and Waukesha Cos. It has also been recovered from gypsy moth caterpillars in the southern and northern sections of the Kettle Moraine State Forest. (**DNR**)

### CORN

**European Corn Borer** – First instar larvae were observed feeding inside corn whorls in Clark, Eau Claire and Jackson Cos. Second instar larvae were found in Juneau Co. fields. Infestations were heaviest in Adams, Juneau, Waushara and Sauk Co. fields, ranging from 15-30 plants per 100 infested with 2<sup>nd</sup> instar larvae. When whorls were unrolled and examined, the number of larvae found ranged from 1-6 per plant. Columbia, Dodge, Portage, Winnebago, and Fond du Lac were least infested with 0-3 larvae per 50 plants infested.

Early instar **European corn borer** larvae cause shothole feeding damage that becomes apparent as leaves emerge from the whorl. When these symptoms are noticed, unroll the whorl and look for early instar larvae. At this point, larvae can still be found feeding inside the whorl. Later, as larvae develop, they move out of the whorl to feed on the corn leaves and eventually bore into the midrib and corn stalk. Larvae feeding inside the whorl can be killed with an insecticide, but once they bore into the stalk treatment is no longer effective. Some larvae begin tunneling into corn stalks during 3<sup>rd</sup> instar, but most tunneling is done by 4<sup>th</sup> instar larvae. A model developed at Iowa State University predicts that it takes approximately 10 days from hatching to the first stalk tunneling, when daytime temperatures are at 85°F and nighttime temperatures are 60°F. Under these temperature conditions, the **European corn borer** accumulates 22.5 degree days per 24 hours, which means that most larvae will have reached the 4<sup>th</sup> instar, sixteen days after

the first larvae hatch. However, in Wisconsin the average daily temperatures have been cooler, so we can expect more days between hatch and stalk tunneling. Producers should scout now to determine whether control is needed, before **European corn borer** larvae grow beyond the stages where treatment is effective.



<http://www.ipm.iastate.edu/ipm/icm/1999/6-28-1999/ishotholeleaf.html>

**Stalk Borer** – This insect pest feeds on corn leaves, causing large, ragged holes in whorl leaves that sometimes exceed 2 or 3 inches in length (see photo below). Holes of this size may cause leaves to break over or to be cut completely from the plant. Light **stalk borer** injury (0-6 per 50 plants) was observed in Juneau, Clark and Jackson Co. corn fields. Most damage was observed along field margins.



<http://www.ipm.iastate.edu/ipm/icm/1999/6-28-1999/istalkbinj.html>

**Black Cutworm** – Some cutting is still occurring in Clark and Jackson Cos., though corn has grown beyond the cutting stage (V6). Infestations were trace to light in all fields

surveyed. A 7<sup>th</sup> instar larva was found just beneath the soil surface, at the base of one of the cut plants.

**Armyworm** – **Armyworm** leaf feeding was encountered in all fields surveyed, but was light (2-8 damaged plants per 50) in all cases. **Armyworm** feeding injury (see photo below) is characterized by feeding along the leaf margins leaving corn leaves ragged, and sometimes only the midrib remains. In all fields surveyed damaged plants were most often found in the outer rows, near field margins. Spotty infestations are typical of **armyworm**, and may require spot treatment in select areas within a field. Spot treatment is recommended when there are two or more **armyworms** at ¾ inch or longer per plant on 25% of the plants, or when there is one **armyworm** per plant on 75% of the plants.



<http://www.ipm.iastate.edu/ipm/icm/1999/6-28-1999/iarmywinj.html>

**Common Maize Rust** – Trace levels of **common maize rust** were widespread from Winnebago Co. to Walworth Co. on field corn. Pustules of cinnamon-brown spores occurred on lower leaves, but at a very low incidence. The disease is favored by cool temperatures and high relative humidity, which might explain the low incidence. Sweet corn and seed growers should be alert for the presence of common maize rust, particularly with apparent race changes in the last few years allowing infection on formerly resistant sweet corn varieties.

**Eyespot and Anthracnose** – The incidence of

these early leaf blights continues to be low throughout much of the corn region, perhaps due to the lack of moisture. plant. Columbia, Dodge, Portage, Winnebago, and Fond du lac were least infested with 0-3 larvae per 50 plants infested.

### FORAGES

**Potato Leafhopper** – Above-treatment-threshold populations of **potato leafhopper** adults and nymphs were detected in Clark, Jackson and Eau Claire Cos. earlier this week. Counts in Jackson Co. ranged from 0.4 to 1.0 per sweep in 8" alfalfa, 1.6 to 1.8 in 12" alfalfa in Clark Co., and from 1.5 to 1.7 per sweep in 10" alfalfa in Eau Claire Co. One Clark Co. field had counts of 2.1 **potato leafhoppers** per sweep in 10" alfalfa, a count well above the economic threshold for alfalfa of this height. The economic threshold for **potato leafhopper** in 8-11 inch alfalfa is 1.0/sweep, and for alfalfa 12 inches and taller is 2.0 **leafhoppers** per sweep. Despite these high counts, little or no feeding injury (*hopperburn*) was observed.

Fields ranging from 5 to 20-inches tall surveyed in Sauk, Adams, Waushara, and Marinette Cos. contained few **potato leafhoppers**, zero per sweep in 5-inch alfalfa to 0.5 per sweep in 20-inch alfalfa. Control is warranted in any fields exceeding the economic threshold for **potato leafhopper**, but treating is *not* recommended for growers within 7 days of their normal cutting schedule.

**Alfalfa Caterpillar** – Fourth and fifth instar **alfalfa caterpillars** were a common sight in alfalfa fields surveyed in Northern Wisconsin. **Alfalfa caterpillars** are bright green with a white longitudinal stripe running down both sides (see photo below). These caterpillars damage alfalfa by feeding on leaflets, but feeding is rarely extensive enough to cause economic damage. Control is suggested when **alfalfa caterpillar** counts exceed 10 or more caterpillars per sweep. No fields surveyed had counts exceeding the economic threshold for this insect pest.

<http://www.ipm.ucdavis.edu/PMG/C/I-LP-CEUR-LV.009.html>



<http://datcp.state.wi.us/static/pestbull>

**SMALL GRAIN**

**Ergot** – **Ergot**, a fungus with a long association with human history, has been showing up at very low levels in small grain fields across Wisconsin. Common on rye, **ergot** was also found in a wheat field in Winnebago Co. this week. Exceeding market tolerances of **ergot** sclerotia in grain may lead to discounts at the elevator, due to human and animal toxicities associated with alkaloid compounds produced by the fungus.

**Rusts** – Both **leaf rust of wheat** and **crown rust of oats** were present on susceptible cultivars across much of the southern part of the state, with some infections tending to be severe. Many wheat fields show no evidence of rust infection, however. The hot weather of the last two weeks has made it virtually impossible to find active **stripe rust** infections on wheat.

**VEGETABLES**

**Late blight**- Weather conditions during the past two weeks have slowed the development of **late blight**. Low relative humidity, warm temperatures and drying conditions have greatly reduced the risk of disease spread. The number of fields with symptoms of **late blight** has stabilized and growers are making progress in containing the problem. Aggressive action over the past month has kept the disease in check and prevented a widespread epidemic. There are still many fields in central Wisconsin where **late blight** has been detected and there is still a high risk of further damage if growers over-irrigate or we move into another extended cool and wet period. We still have a long stretch of the growing season before vinekill and harvest. Growers should continue to intensively scout their fields for disease and to continue the careful application of fungicides to insure complete and thorough coverage of all plants with protective materials.

<b>Current P-Day and Severity Value Accumulations (as of July 3, 2001)</b>		
<b><u>Location</u></b>	<b><u>P-Day Total</u></b>	<b><u>Severity Value Total</u></b>
Antigo emerging 5/18	278	58
Antigo emerging 6/01	216	38
Grand Marsh emerging 5/13	345	42
Grand Marsh emerging 5/23	263	38
Hancock emerging 5/10	356	21
Hancock emerging 5/22	274	20
Plover emerging 5/10	356	75
Plover emerging 5/20	291	70
Plover emerging 6/01	228	55

**SOYBEANS**

**Soybean Aphid** – Grant and Iowa Co. Ag. Agents, Ted Bay, and Rhonda Gildersleeve each found soybean aphids in their counties last Friday. Counts ranged from zero to 2 infested plants per 30 plants in V-3 and V-4 soybeans. Fields with a canopy that covered most or all of the ground had aphids. Aphids were not found in nearby fields without the canopy cover. The canopy consists of soybeans or a combination of soybeans and weeds. Soybean aphids were found on 18 of 30 plants in Sauk Co., and 2 of 30 plants in Walworth Co. In other counties surveyed (Wood, Juneau, Clark, Portage, Waushara, Eau Claire and Jackson Cos.) no aphids were detected. Dr. Hogg reported an increase of 3 to 46 percent infested plants in a Dane Co. research field. In a Columbia Co. field, the wooded border was 100 percent infested. Meanwhile other fields show little or no increase in population. **(UWEX in part)**

**Rating Scale for Aphid Severity**

**Rating Aphids observed on one plant in 45 sec or less**

0	0
1	1-10
2	11-25
3	26-99
4	100+

**Bean Leaf Beetle** – Trace to light feeding damage (less than 5%) was noted in all soybean fields surveyed. Although feeding was evident, no adults were observed.

**Green Cloverworm** – Producers scouting their soybean fields will likely encounter small, light green larvae feeding on soybean leaves. These larvae, known as the **green cloverworm** are the only species of caterpillar that feed in soybean fields that are believed to pose a threat to soybean crops. Although this pest is considered a potential threat, very few large outbreaks have been documented in recent years. **Green cloverworm** leaf feeding injury is characterized by ragged holes, in contrast to the smooth, rounded holed made by **bean leaf beetles**. **Green cloverworm** may attack soybean pods, causing yield reductions when populations are heavy. When leaf feeding is observed and **green cloverworm** is suspected, shake several plants in a row and check the ground for larvae. Repeat this process in several areas throughout the field and record the number of larvae per foot of row. UW-Extension recommends treating when defoliation occurs during blooming, pod set or pod fill, generally when 12 or more **cloverworms** per foot of row are counted and 20% defoliation is observed.

**Painted lady butterfly** – Larvae were found enjoying a meal of soybean leaves in Sauk Co. The caterpillars are brown to

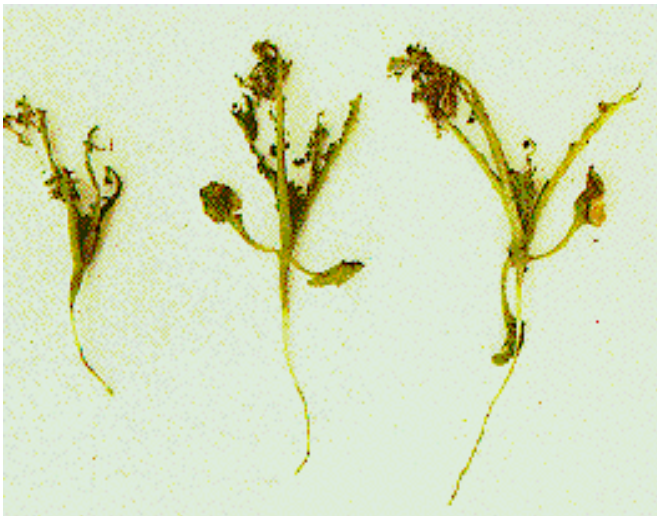


black, hairy with a pale-yellow stripe along each side and about 1 1/2-inches long when fully grown. Infestations do not usually occur in large enough numbers to cause significant crop damage.

#### Painted lady larvae.



#### Painted lady feeding injury.



<http://www.env.gov.bc.ca/epd/ipm/docs/sheet20.html>

### GINSENG

**PLANT DISEASE DIAGNOSTICS CLINIC** – Dr. Brian Hudelson reports ginseng seedlings submitted to the clinic were diagnosed with the following diseases: **Mystery Seedling Disease**, **Tip-over**, and **Pythium root rot** also called **Damping-off**.

**CULTIVATED GINSENG SURVEY** – **Phytophthora root rot** and **Phytophthora leaf blight** were present in ginseng beds in

a woodland setting in southern Wisconsin. Leaves infected with **Phytophthora** display symptoms different from **Alternaria** infected leaves. There are no light green or yellow edges around lesions. Infections often start at leaf tips and appear water soaked or in later stages crispy dry. Control treatments for **Phytophthora** and **Alternaria leaf blight** are identical though.



**Phytophthora Leaf Blight,**  
courtesy B. Hudelson

#### **Emergence**

**Damage** can be observed on a few plants scattered throughout almost any garden. Foliage develops in a distorted way when young emerging plants are exposed to low temperatures in spring. This may slightly reduce root growth for affected plants but it is not disease related and therefore does not spread.



**Emergence Damage**

#### **PHENOLOGY**–

South of the main central Wisconsin ginseng growing area four year old plants are forming berries. The berries are still green and only present on plants that emerged early.

**CULTIVATED GINSENG EXPORT PROGRAM**– With or without an operating ginseng marketing order, ginseng sold by growers and dealers for export must be accompanied by a certificate of origin issued by DATCP's ginseng program. This state certification program operates under state statute 94.50. It is a federally mandated program necessary because of the international CITES treaty (Convention on Trade of Endangered Species). Application forms are available on the web at <http://datcp.state.wi.us/static/arm/certs/ginslic.htm> or call Chris Nelson at (608) 224-4500.

### FOREST, SHADE TREE, ORNAMENTALS AND TURF

**Imported willow leaf beetle** - Severe defoliation was occurring on willow at a nursery dealer in Jefferson Co.

**Black vine weevil** - *Densiformis* yews at a nursery dealer in Jefferson Co. had leaf notching indicative of this pest. One live adult was also found on the foliage.

**Pine spittle bug** - Infestations were light on Scotch and white pine at nurseries in Lincoln and Waukesha Cos.

**Slugs** - Injury was most noticeable to hosta at nurseries in Grant and Waukesha Cos.

**Balsam gall midge** - Small numbers of galls were observed on balsam fir at a nursery in Lincoln Co.

**Balsam twig aphid** - Damage from earlier feeding was evident on balsam and fraser fir at nurseries in Lincoln, Polk and Sawyer Cos.

**Spring rose beetle** - The first adult of the season was observed on a sandy-soiled area of Sauk Co. near Sauk City.  
**(DATCPretiree)**

**Rust on fir** - Light amounts of needle rust were found on balsam fir at several nurseries in Lincoln Co.

**White pine blister rust** - Light to moderate amounts of cankering were observed on white pine at several nurseries in Lincoln Co.

**Quince rust** - Infected fruits were found on thornless cockspur hawthorn at a nursery in Waukesha Co.

**Septoria leaf spot** - Pagoda and red twig dogwood were being hit hardest at a nursery in Waukesha Co. The red to purple haloed spots can cause serious defoliation if left untreated.

**Broom rust** - Small amounts of brooming were found on balsam fir at a nursery in Lincoln Co.

#### **STATE/FEDERALPROGRAMS**

**GYPSY MOTH PROGRAM** - Trap setting continues this week. The number of traps set as of 7/5/01 are: 23,810 (71%) of the expected total. Trappers are working on a lot of delimitation sites in the state which requires more walking and time to set each trap. Thirty-four counties have been completed and they are: Ashland, Buffalo, Clark, Crawford, Dodge, Door, Douglas, Dunn, Eau Claire, Florence, Fond du Lac, Green, Jackson, Kenosha, Kewaunee, LaCrosse, Manitowoc, Oconto, Outagamie, Ozaukee, Pepin, Pierce, Polk, Racine, Rusk, St. Croix, Sawyer, Sheboygan, Taylor, Trempealeau, Walworth, Washington, Waukesha, and Waupaca. All but 10 of the remaining counties are better than 50% complete. A majority of the remaining 0traps should be up by July 13th with a few counties finishing up the following week.

For more information on the GYPSY MOTH PROGRAM, please call our hotline at 1-800-642-MOTH or visit our website at <http://datcp.state.wi.us/static/gypsymoth>

Apple Insect Trapping Results

County	City	Date	STLM	RBLR	CM	OBLR	AM	AM
<b>Grant Co.</b>								
	Sinsinawa	6/21-6/28	32	30	7	7	(sticky board)(red sphere)	
		6/29-7/5	15	11	1	3	0	0
	Gays Mills-W2	6/24-7/3	20	0	0	0	0	0
<b>Richland Co.</b>								
	Hill Point	6/26-7/2	200	14	1	8	0	0
<b>Iowa Co.</b>								
	Spring Green	6/29-7/5	84	32	12	38		
	Dodgeville*	6/29-7/5	40	30	7		0	
<b>Dane Co.</b>								
	Middleton	6/29-7/5	50	75	5	3		
	Deerfield	6/27-7/3	320	1	10		0	0
	Waunakee	6/26-7/3	103	1	2	1	0	
<b>Green Co.</b>								
	Brodhead	6/27-7/3	60	6	1	1		0
<b>Juneau Co.</b>								
	Mauston	6/24-7/1	162	3	0	0	0	0
<b>Jackson Co.</b>								
	Hixton	6/27-7/2	122	0	0	0		
<b>Pierce Co.</b>								
	Beldenville	6/27-7/3	98	6	7	2		
	Spring Valley	6/26-7/3	884	0	1	5		
<b>Trempealeau Co.</b>								
	Galesville	6/26-7/2	220	5	0	0	0	0
<b>Fond du Lac Co.</b>								
	Rosendale	6/25-7/2	11	0	2	1	0	0
	Malone	6/26-7/2	30	14	3	7	0	0
<b>Marquette Co.</b>								
	Montello*	6/24-7/1	871	49	0	20	0	0
<b>Racine Co.</b>								
	Rochester*	6/27-7/4	1004	13	13	2	0	0
		6/28-7/4			4			
		6/28-7/4			2			
<b>Brown Co.</b>								
	Oneida	6/23-6/30	48	0	1			

**BLACKLIGHT TRAPPING RESULTS**

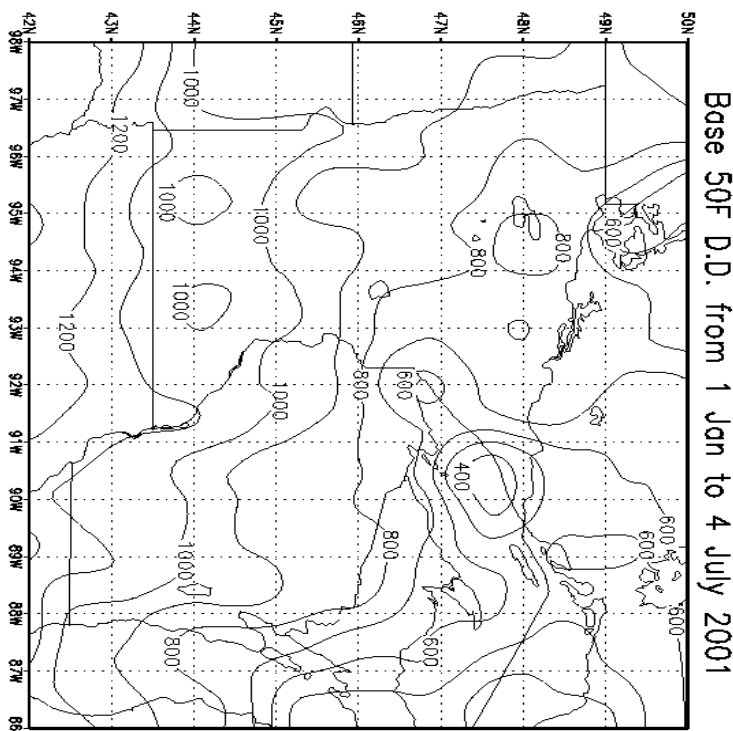
For the week ending July 4

Site	Euro.					
	Corn Borer	Army-Worm	Black Cutw.	Vari. Cutw.	Spot. Cutw.	Corn Earw.
<b>South Central</b>						
Middleton	64	3	11	2	5	0
<b>Central</b>						
Marshfield	3	1	0	0	100	6
<b>Northwest</b>						
Chippewa	1					



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**RECOMMENDED WEB SITE** - Check out the USDA database by Dr. James Duke listing thousands of plants, the phytochemicals they contain, activities of these phytochemicals, and ethnobotanical folklore at <http://www.ars-grin.gov/duke>