



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

WEATHER AND PESTS

This issue starts the weekly Cooperative Pest Survey Bulletin for the growing season.

Most areas of the state have had more than enough rain making field work difficult at best. Frost is out of the ground in most of the state and winter wheat looks good from most accounts.

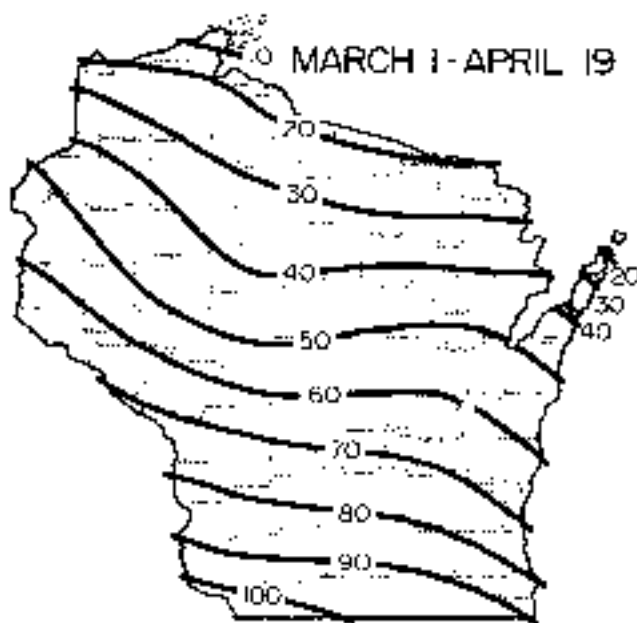
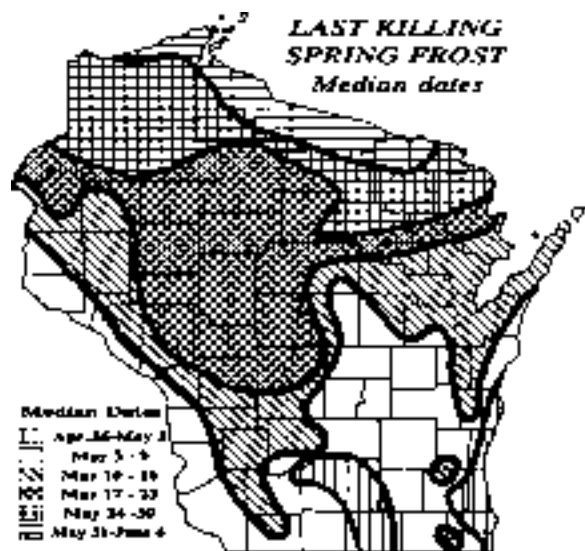
Gypsy moth treatments are not far off for our state/federal program. For maps of the treatment areas go to <http://datcp.state.wi.us/gypsymoth/spraysites.htm>

Some **redbanded leafroller** and **spotted tentiform leafminer** adults are flying in the southwestern part of the state

Growing degree days from March 1 through April 18 were:

Site	GDD*	2000 GDD	Normal GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	76	162	101	71	207
Lone Rock	66	142	83	61	201
SOUTHCENTRAL					
Beloit	92	149	93	87	250
Madison	67	121	81	60	198
Sullivan	74	129	78	70	225
Juneau	68	125	71	64	207
SOUTHEAST					
Waukesha	59	123	73	57	194
Hartford	57	119	70	55	184
Racine	53	117	78	50	166
Milwaukee	47	106	73	45	155
EAST CENTRAL					
Appleton	44	93	54	38	140
Green Bay	34	79	47	31	123
CENTRAL					
Big Flats	49	106	60	42	151
Hancock	48	103	60	42	148
Port Edwards	38	95	55	32	119
WEST CENTRAL					
LaCrosse	54	153	68	47	157
Eau Claire	33	119	50	27	115
NORTHWEST					
Cumberland	18	81	45	15	98
Bayfield	6	47	9	4	52
NORTH CENTRAL					
Wausau	24	81	42	20	96
Medford	20	73	38	17	89
NORTHEAST					
Crivitz	20	65	35	18	103
Crandon	13	66	27	11	81

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.



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

ALERTS

Multicolored Asian lady beetle - The last issue of the Pest Survey Bulletin contained a web site for looking up information on releases of beneficial organisms. With the stated web site you could not get directly to the releases of beneficial organisms. The correct address is <http://www.ars-grin.gov/nigrp/>. Then click on ROBO (Releases Of Beneficial Organisms) and search for *Harmonia axyridis*.

Field Day - The Wisconsin Fresh Market Vegetable Grower Association, in cooperation with the University of Wisconsin-Extension, will be presenting a field day on Tuesday, May 15 from 8:30 - 1:30 at the JenEhr Farm in Sun Prairie. (See map below)



The farm, operated by Kay Jensen and Paul Ehrhardt is a young, organic production system that offers vegetables, strawberries, pasture-raised poultry and in the future, fresh raspberries. The WFMVGA decided to hold their summer field day on the JenEhr farm to show how farms in their infancy manage their operation and the marketing of their produce. The JenEhr Farm is located at 6837 Elder Lane, just off Hwy 151 at the VV exit in Sun Prairie.

The schedule of events includes a farm overview and tour, how to utilize media for produce marketing, advantages of floating row covers, organic materials management, labor-saving tools demonstration, and a phenology discussion. Several UWEX specialists will be on hand to answer growers questions. The program is designed to offer something to new growers and veteran growers alike.

Registration is through the WFMVGA and the cost is \$25 per farm for up to 2 participants or \$15 per person. Registrations should be mailed to Anna Maenner, c/o the WFMVGA, 211 Canal Road, Waterloo, WI 53594 and must be received by May 8. Please contact Anna with any questions you may have (920)478-3852.

CORN

Black cutworm – By this time last year **black cutworm** flight was already underway, with moths showing up in pheromone traps set in several of the southernmost counties of the state. As you might expect, with the cooler spring temperatures we've been seeing, things are not moving at the same accelerated pace they did last year. **Black cutworm** pheromone traps have been in place in Madison, Evansville, Monroe, Darlington, Lancaster and Avoca for 2 weeks now, and still we've seen no signs of activity.

In the next few weeks we'll be closely monitoring traps to determine when **black cutworm** flight has begun. The earliest trap catches signal flight has started and that more moths will be arriving soon. Ultimately, pheromone trap catches are used to predict when the first cutting will occur. **Black cutworm** is most damaging during the 4th instar stage of development. This is the stage where the larvae begin cutting corn seedlings. Cutting can be expected to begin approximately three weeks after the first "intense" flight arrives. An "intense" flight is a trap catch of 8-9 moths in a 1-2 night period. Growers can expect cutting to begin about 3 weeks after a flight arrives, or once 300 GDD50 have accumulated after the first "intense" flight.

Stewart's wilt - During the past two growing seasons, **Stewart's wilt** bacterial disease of corn (caused by *Pantoea stewartii*) has increased in both its severity and distribution in Wisconsin. **Stewart's wilt** disease is spread by an insect, the **corn flea beetle**, which has become more prevalent in recent years because mild winter temperatures have allowed greater **corn flea beetle** survival. In 1934 the Stevens-Boewe index was developed to give growers a rough idea of how prevalent **Stewart's wilt** was likely to be. This index consists of the sum of the average air temperatures for the previous December, January and February and roughly estimates the likelihood that **corn flea beetles** will survive the winter. An index of 100°F and above predicts that **Stewart's wilt** is likely to be severe, 90 to 99 °F indicates moderate to severe, 81 to 90°F indicates light to moderate, and an index of less than 80°F predicts little or no **Stewart's wilt**. For the months of December 1999, January and February of 2000, however, the highest index reading for Wisconsin was 79.9°F. According to the temperature index, neither the insect nor the disease should have been present. Survey and inspections conducted in 2000 found that both **Stewart's wilt** and the **corn flea beetles** were widely distributed in the state.

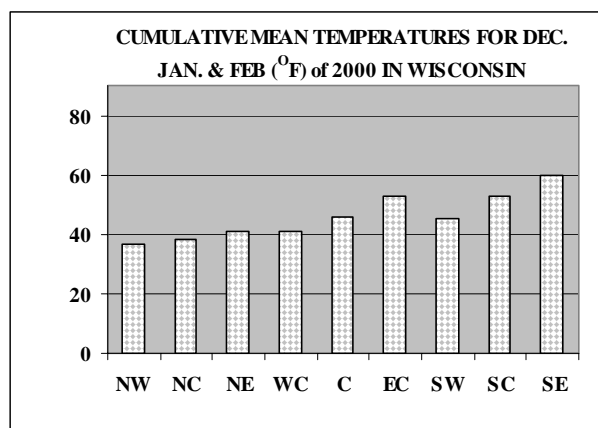
The temperature index for the passing winter, i.e. December 2000, January and February of 2001 predicts little or no **Stewart's wilt** in most of Wisconsin (see Figure). The maximum cumulative temperature record was 67.9°F at a site in Milwaukee Co. The cumulative mean temperatures for the nine districts in the state ranged from about 37 in the northwest to 59.7°F in the

southeast.

There is a strong possibility that this index underestimates the risk of **Stewart's wilt** particularly for the southern tier of counties in the state. The temperature index is calculated from the air temperature; but the **corn flea beetle** spends the winter in ditch banks and hedge rows, sheltered from extreme temperatures by leaf litter, soil and snow cover. December, the coldest month of the past winter, was also the month with the heaviest snow cover. Consequently, air temperature may not reflect the actual temperatures that the beetles were exposed to. Another factor to consider is that laboratory analysis by DATCP on **corn flea beetle** samples in the fall of 2000 indicates that a high proportion of **corn flea beetles** were infected with the bacteria which causes **Stewart's wilt**. Of 109 samples collected from 44 counties, 48% were positive for the bacteria. Surviving **corn flea beetles** may be able to spread the disease for the next crop season.

Growers in areas that have experienced **Stewart's wilt** problems during the past two seasons should be alert to the possibility of infection this year. The first line of defense is to plant varieties that are resistant to the disease. The EPA has issued a Section 18 Permit for treatment of sweet corn seed in Idaho with Gaucho (imidacloprid). This insecticide has been shown to be effective against **corn flea beetle** in experimental tests. Treatment of seed in Wisconsin is not permitted but recommendations on control are available from UW Extension.

Researchers at Iowa and Michigan State Universities have initiated a research project to develop better tools to predict, detect and control **corn flea beetle** and **Stewart's wilt** disease. We hope, in the future, to have a better temperature index, monitoring schemes, and control strategies. Until then, growers should be considering preventative measures, especially those in areas that have



experienced **Stewart's wilt** problems in the past. (Temperature data courtesy of Mr. Lyle Anderson, State Climatologist, Madison.)

VEGETABLES

Flea beetles – **Flea beetles** are pests of numerous crops. They emerge from the soil when the spring temperature warms to 50°F. Many different **flea beetles** feed on weeds and early-planted crops. The **crucifer flea beetle**, which feeds on cabbage and related plants, is different from the **spinach flea beetle** found on spinach and beets. Regardless of which beetle is which, they all make small round holes and may cause considerable damage to seedlings.

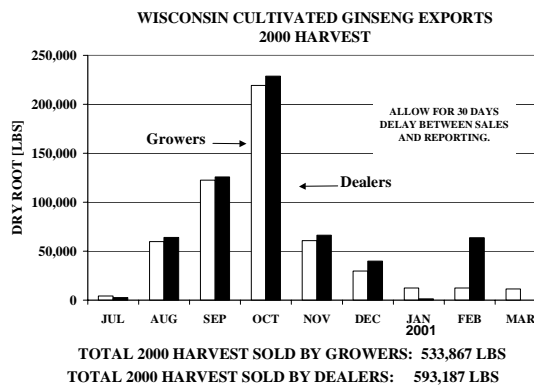
Cultural controls include adjusting planting dates to avoid damage, covering seed beds with floating row covers to prevent egg laying, removing alternate weed hosts, deep spring plowing and crop rotation. Chemical control recommendations are found in UW-Extension Bulletin A3422, available at your County Extension Office. Some experimental work has been done on trap crops. In Colorado, a radish cultivar, "Japanese Daikon" was interplanted with broccoli. This reduced the number of **flea beetles** on the broccoli. More information on **flea beetles** is found at, <http://ipcm.wisc.edu/news/Update/X-Files/FleaBeetles.pdf> and <http://attra.ncat.org/attra-pub/farmscaping/fsappendixd/html>

GINSENG

CULTIVATED GINSENG EXPORT PROGRAM—Grower dry root sales of ginseng harvested in 2000 added up to 533,867 lbs. as of March 27, 2001. Dealers sold 593,187 lbs. of 2000 harvested during the same time frame.

Ginseng dealers annually report ginseng purchases from other states and Canada. These out-of state purchases amounted to 150,922.62 lbs. in 2000. These ginseng shipments were certified by the state or country of origin. It is not included in the Wisconsin export statistics above.

Marketing order assessments will be based on grower sales of 1,011,224.38 lbs. dry root and 1,160.86 lbs. of seed during the calendar year 2000. These grower sales include ginseng harvested in 2000, 1999, and some in 1998, 1997 and 1993 but not sold until 2000.



FOREST, SHADE TREE, ORNAMENTALS AND TURF

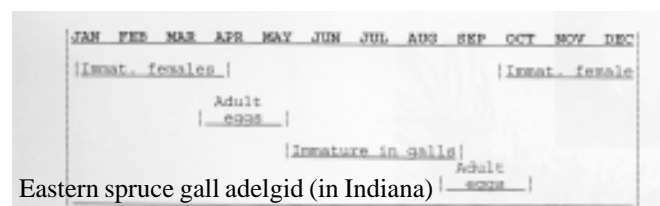
Gypsy moth identification training - Our Slow-the-Spread gypsy moth regulatory officer will be conducting training sessions throughout the northern part of the state this spring. Training sessions consist of identification of different gypsy moth life stages, how to treat and/or dispose of egg masses, regulations for the timber industry and other topics of interest to participants. This training is geared towards those in the timber industry. For more information on the training sessions contact Linda Windmoeller at (715) 339-4245 or linda.windmoeller@datcp.state.wi.us.

- Mon., April 23 Iron River: Community Center, Bayfield Co. FISTA Pine Mgt. SFI Workshop
- Wed., April 25 Argonne: Experimental Forest, Forest Co. FISTA Northern Hardwoods Mgt. SFI Workshop
- Thu., April 26 Mellen: Steakout Restaurant, Ashland Co. FISTA Timber Cruising SFI Workshop
- Fri., April 27 Tomahawk: PCA, 10 AM, Lincoln Co.
- Fri., April 27 Tomahawk: Steigerwald Land Consultants, 1 PM
- Wed., May 2 Eagle River: Eagle River Inn & Resort, Vilas Co. FISTA Sawlog Utilization SFI Workshop
- Thu., May 3 Mountain: Community Building, 8:30 AM, Forest Co. FISTA Sawlog Utilization SFI Workshop
- Thu., May 3 Gresham: The Woodland, 11 AM, Shawano Co. FISTA Forest Mgt. SFI Workshop
- Mon., May 7 Park Falls: Flambeau Lanes, Price Co. FISTA Business Mgt. SFI Workshop
- Wed., May 9 Ashland: Ag. Research Station, Ashland Co. FISTA Sawlog Utilization SFI Workshop
- Thu., May 10 Ladysmith: El Rancho Restaurant, Rusk Co. FISTA Sawlog Utilization SFI Workshop

Rhizosphaera needle blight - Heavy amounts were found on Colorado spruce in low spots of a field in Chippewa Co.

Eastern spruce gall adelgid - Light to heavy numbers of old

galls were observed on black hills spruce at a nursery in Chippewa Co. Apply controls for overwintering females during warm spring weather as *Magnolia X soulangiana* is pink bud but before petals open (50-100 DD base 50°F).



Eastern spruce gall adelgid (in Indiana)

STATE/FEDERAL PROGRAMS

Gypsy moth program - The trapping program is getting ready for this season. Lead worker training will be held on May 8-9 in Wisconsin Rapids. Training will consist of lead worker responsibilities, trapper training, mapping of data, GPS and laptop computers, trap construction and placement, and data reporting. Southern trapper training will be held in Madison on May 21-22 and northern trapper training will be held in Tomahawk on May 23-24. Training consists of trapper responsibilities during setting, checking and trap takedown, trap construction and placement, operating a GPS unit, outdoor safety, reading maps, moth identification, reporting data, landowner contacts, and filling out paperwork.

After classroom training, trappers will have a day of field training with their crew and lead worker. Each trapper has at least one day of individual training with the lead worker. Each trapper is given 650-700 traps to set which takes 4-5 weeks to complete. Trappers will begin setting traps May 29 and finish around July 7th.

The treatment program is in the process of finalizing the spray blocks for this year. A final list of sites and acreage should be available in 2 weeks.

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

FRUIT

APPLE SCAB - The DATCP apple scab monitoring network is beginning to collect data on growing degree days (GDD). The network consists of ten cooperating orchards around the state, equipped with weather monitoring systems. Data from the network is emailed to DATCP, and information on GDD and infection periods is published on a UW web site. Information from the network can help apple growers determine if scab spores are mature enough to pose an infection threat. It is estimated that 5% of ascospores are mature at 147 DGG (base32) from McIntosh green tip. Once

this threshold has been reached, data from the network will indicate whether infection periods have occurred, according to the Cornell infection model. A second maturity threshold will be reached when an orchard has accumulated 910 GDD; at that point, all the ascospores are presumed to be mature. The first infection period following 100% maturity marks the end of the primary scab season.

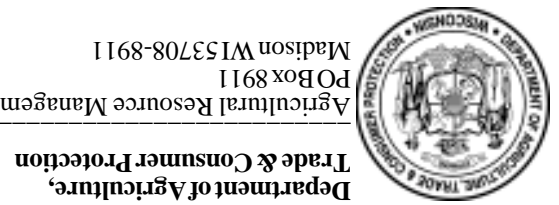
One orchard in the network, located in Racine Co., has reached green tip. Information on GDD accumulation and infection period can be found at <http://www.soils.wisc.edu/cgi-bin/aws/scabsummary>

Apple Insect Trapping Results

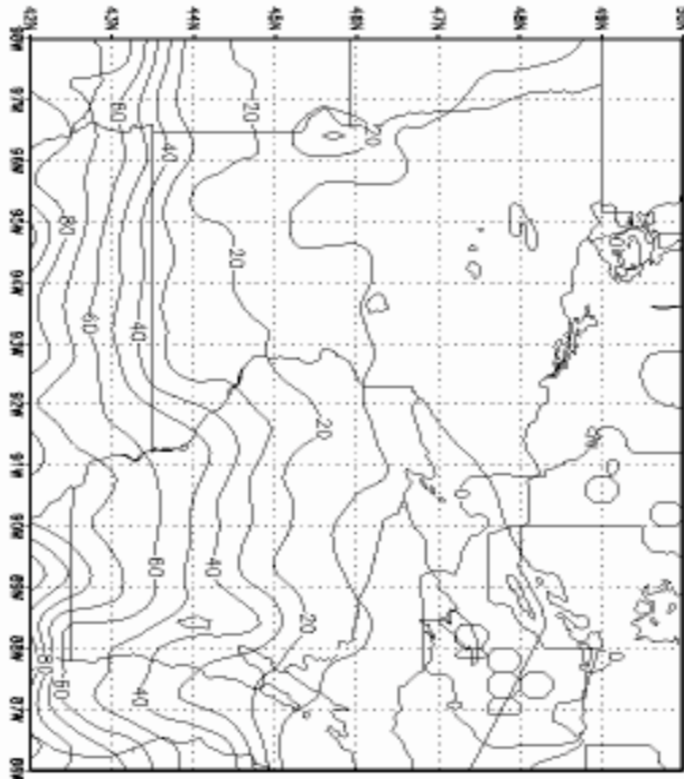
County				
City	Date	STLM	RBLR	CM
Grant Co.				
Sinsinawa	4/9-4/16	NA	5	
Lancaster	4/9-4/16	5	1	
Iowa Co.				
* Dodgeville	4/11-4/18	0	0	
Waunakee	4/10-4/17	0		
Jackson Co.				
Hixton	4/9-4/16	0	0	0

* Indicates new cooperator for 2001

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Degree Days (base 50°F) Jan 1 through April 18, 2001



Website of the Week

Each issue, we hope to highlight a website we believe our readers may find interesting. (Of course, notice is provided for information only—no endorsement is meant or implied.) This week's site:

Digital Aerial Photos and Topo Maps

<http://terraserver.microsoft.com/>

This web site gives free online access to USGS digital aerial photographs and digital topographic maps.