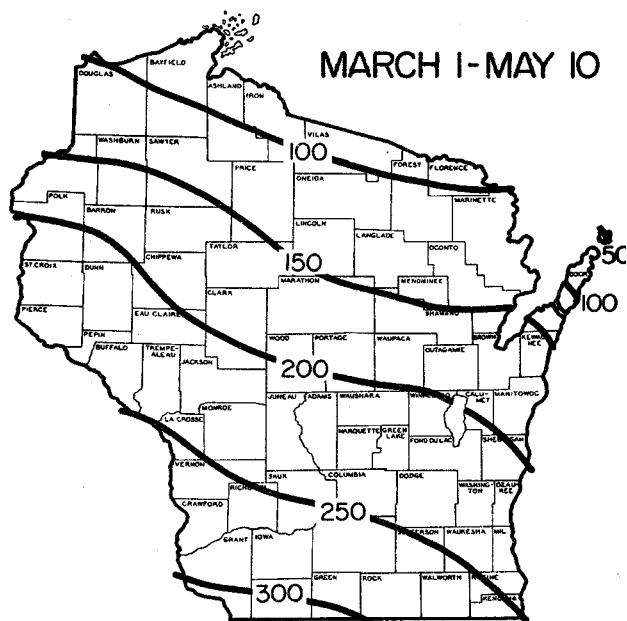
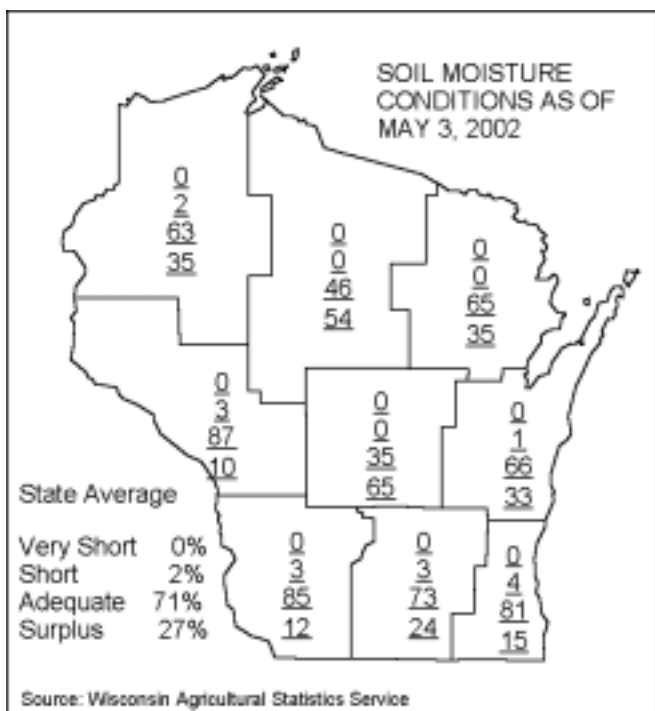


Cooperative Pest Survey Bulletin

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



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

WEATHER AND PESTS

Temperatures continued to lag behind the yearly average this past week. Wet field conditions have kept many farmers and growers out of their fields. Insects and diseases, unfortunately, travel much more lightly, so see the **ALERTS** section for some old and new pests coming your way.

Growing degree days from March 1 through May 8 were:

Site	GDD*	2001 GDD	Normal GDD	Base 48	Base 40
SOUTHWEST					
Dubuque, IA	264	317	295	266	543
Lone Rock	238	289	251	229	492
SOUTHCENTRAL					
Beloit	263	343	268	242	546
Madison	229	289	254	221	476
Sullivan	242	311	237	223	512
Juneau	222	295	215	224	469
SOUTHEAST					
Waukesha	219	276	235	191	466
Hartford	206	269	212	201	439
Racine	201	249	229	173	421
Milwaukee	187	234	220	181	402
EAST CENTRAL					
Appleton	160	228	191	160	361
Green Bay	122	193	162	123	305
CENTRAL					
Big Flats	205	250	202	193	421
Hancock	196	249	201	185	408
Port Edwards	174	222	193	162	368
WEST CENTRAL					
LaCrosse	232	268	234	210	469
Eau Claire	179	232	190	171	371
NORTHWEST					
Cumberland	127	196	171	115	279
Bayfield	61	125	68	51	162
NORTH CENTRAL					
Wausau	135	191	164	130	303
Medford	116	187	153	108	265
NORTHEAST					
Crivitz	100	180	128	95	257
Crandon	98	173	117	88	227

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 flea beetle – An overwintering adult was collected in Kenosha Co., confirming the survival of adults in the southeastern region of the state. Corn producers in this area should not dismiss the possibility of the return of **Stewart’s wilt** in 2002. See the **CORN** section for more details.

Armyworm – 824 moths were captured at a trapping site near Janesville from May 2-8. The bulk of the moths, 632, turned up during the evening hours on May 8. See the **CORN** section for more details.

Spotted tentiform leafminer – Trap counts of 1400+ indicate peak flight is occurring in the southeast. Growers are encouraged to begin scouting for leaf mines approximately one week after peak adult flight.

Codling moth – The first moth of the season was trapped near Rochester in Racine Co. Pheromone trap catches should be used to determine the “biofix”, or starting date of the first sustained flight of male moths. Control treatments are most effective when applied at 250 DD (base 50°F) after the cumulative capture of 5 moths per trap (Midwest Tree Fruit Management Handbook).

Bean leaf beetle – A single adult was sighted at the West Madison Research Station earlier this week, indicating overwintering adults are active. Soybean growers in the southern part of the state should be alert to the possibility of high **bean leaf beetle**

populations following the unusually mild 2001-2002 winter.

Special aquatic pesticide registration offered for public review-

Water from a pond or lake that has been treated with an aquatic pesticide could be used to irrigate non-food crop areas under a special pesticide registration proposed by the Wisconsin

Department of Agriculture, Trade and Consumer Protection. The special registration will allow water treated with one of four pesticides containing **endothall**, to be used on turf, golf courses or sod. Wisconsin citizens have until May 21 to review and comment on the proposed five-year special pesticide registration.

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., Tuesday, May 21, 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.

CORN

Corn flea beetle - A single overwintering adult was swept from the grassy margin of a field with corn stubble in Kenosha Co. This finding is important because it indicates that some percentage of the **corn flea beetle** population survived the winter months in Kenosha Co. This finding is not surprising, considering winter temperatures in Kenosha Co. and throughout the entire southeastern region of the state were exceptionally mild. The spring follow-up survey, to determine the overwintering range of **corn flea beetles** is scheduled to begin early next week. Survey results will give us a better idea of the areas that will be most at risk for the

Pests monitored by black light trapping



Photos courtesy of South Central Research and Extension Center. University of Nebraska-Lincoln

return of **Stewart's wilt** in 2002.

Black light trapping – This is an effective way to monitor the flights of a number of nocturnal moth species, including the **European corn borer, armyworm, corn earworm, black cutworm, variegated cutworm, and spotted cutworm**, to name a few. In general, high numbers of a single species in a black light trap *may* indicate that an unusually large larval population will follow in 2-4 weeks. Counts, however, do not indicate whether a pest outbreak will occur. Outbreaks are influenced by several variables, such as weather, parasites, predators, pathogens, chemical control programs for other pests. These are all difficult to predict, and can only be confirmed through routine scouting.

Our black light trapping cooperator network includes 14 sites this year, spanning as far north as New Richmond and as far south as Rochelle, Illinois. Weekly trap counts will help us monitor the flight activity of the economically important pests listed above, and will keep us alert to any potential outbreaks. See pictures on the previous page for pictures of a few pests monitored with black light traps.

Armyworm – A large capture of 824 moths occurred between May 2 and 8 near Janesville, in Rock Co. A good number of these moths, 632, were captured during the evening hours on May 8. It will be important to monitor activity closely in the next few weeks. To date our surveyors have seen no evidence of **armyworm** infestations in wheat fields surveyed (Kenosha, Racine, Jefferson, Dane, Lafayette, Marquette Cos.), but this could change dramatically in the next week, if this influx of migratory moths continues.

Black cutworm – Five moths were caught at Belmont in Lafayette Co. during the week ending May 6. Two or fewer moths were caught at sites near Dodgeville, Mineral Point, Dickeyville, Platteville, Benton, Cuba City, Gratiot, South Wayne and Monroe.

The “concentrated capture” of 8-9 moths in 2 nights that we’ve been anticipating has not yet occurred. Despite this, we can still forecast when seedling corn is most vulnerable to **black cutworm** feeding injury. As a general rule, corn is most susceptible to injury during the 10-14 days following emergence, and poorly drained, weedy, and late-planted fields tend to be most at-risk of infestation. Growers are encouraged to err on the side of caution and begin scouting for black cutworm activity following corn emergence, and continue through the V3 or V4 leaf stage.

FORAGES

Alfalfa weevil – Sweep net samples turned up 4 or fewer adults per 50 sweeps in Green, Iowa, Dane, Lafayette Co. fields this week. No larvae were detected in the fields surveyed, and no adults were swept from

Adams and Marquette Co. fields. Further, only trace amounts of damage have been observed, which is atypical for this time of year. Last year at this time we were seeing 1st and 2nd instar larvae.

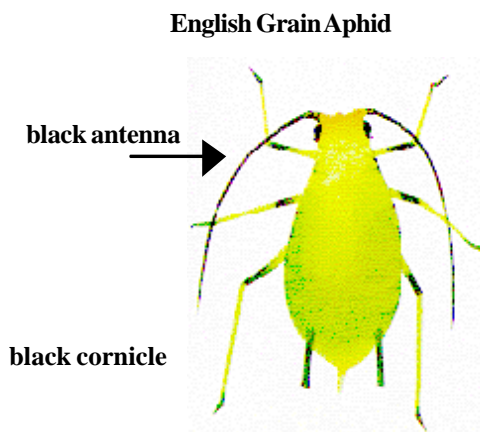
Alfalfa weevil is another insect in the long list of pest insects that benefit from mild winter temperatures, so once temperatures pick up and remain consistently warm we could see a surge in feeding activity.

Scott Reuss, Marinette County UWEX agent, noted, “alfalfa weevil feeding present in some areas, relatively light, to this point. Four sizable alfalfa fields fully scouted in the Crivitz area yielded 0, 8.7, 15.6, and 34% tip feeding present, but all the feeding damage was extremely minimal. Alfalfa in these fields ranged from 4 to 8 inches tall.”

Potato leafhopper – A single adult was swept from a Lafayette Co. field, but it is likely that this is *not* one of the spring migrants we expect to arrive around mid-May. Warm southerly winds deliver these migrants from the Gulf States. As is the case with all migratory insect pests, damage potential is based on weather patterns, meaning outbreaks aren’t easy to predict from year to year. **Potato leafhopper** damage is often first visible along field margins, and problems are most severe when conditions are dry.

SMALL GRAIN

English grain aphid – Winged migrants and nymphs were swept in 4-5 leaf stage winter wheat in Racine and Jefferson Cos. this week. This aphid is common in small grains, and is one species in a complex of aphids that transmit **barley yellow**

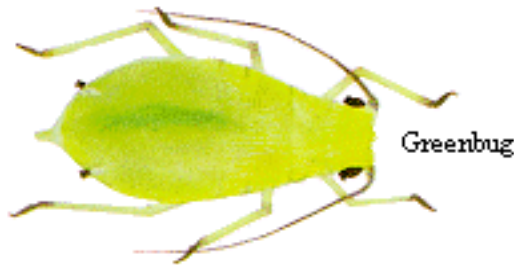


Growth stage	Bird-cherry oat aphid English grain aphid	Greenbug
Seedling	30 aphids per stem	20 aphids per stem
Boot to heading	50 aphids per stem	30 aphids per stem

From: University of Wisconsin-Extension Crop Scouting Manual Version 2.0



Oat Bird-Cherry Aphid



Greenbug

dwarf virus (BYDV). The **English grain aphid** is dark green in color, with black antennae and long, black cornicles, making it fairly easy to distinguish from the **bird-cherry oat aphid** and the **greenbug**. **Bird-cherry oat aphid** is yellow or olive green to black in color, and the **greenbug** is pale green with a dark green stripe down the middle of the back. See pictures and treatment threshold table.

SOYBEANS

Bean leaf beetle – A single adult was observed at the West Madison Research Station earlier this week, indicating adults are emerging from their overwintering sites. Reports from Iowa and Illinois suggest a heavy year for this insect. Although **bean leaf beetles** are soybean pests, they emerge

well in advance of soybean planting. Adults migrate to forage fields first, then mate and wait for soybeans to emerge. Once soybeans emerge, the beetles move from forage crops to soybean fields where they can severely defoliate soybean seedlings. Our surveyors have not yet detected any **bean leaf beetles** in alfalfa and clover fields. Close monitoring of numbers of adults in forage fields may indicate what to expect in soybeans later this summer. (C. Grau, UWEX in part)

GINSENG

PLANT DISEASE DIAGNOSTICS CLINIC - Dr. Brian Hudelson reports ginseng roots of mature plants with **Rusty root** symptoms infected with *Phytophthora cactorum*. The pathogen was also found in the buds. *Rhizoctonia* and *Cylindrocarpon* were also present.



Rusty-brown, corky, dry tap-root decay typical of rusty root (Photo: B. Hudelson)



Bean Leaf Beetle

Marlin E. Rice
Iowa State University Entomology Department

Dr. Hudelson can be reached at (608) 262-2863, web site: www.plantpath.wisc.edu/pddc
Mailing address: Plant Disease Diagnostic Clinic, Department of Plant Pathology, UW-Madison, 1630 Linden Drive, Madison WI 53706-1598. E-mail: bdh@plantpath.wisc.edu. (UWEX in part)

FOREST, SHADE TREE, ORNAMENTALS AND TURF

Aphids – Aphids were most noticeable on spirea and vegetable transplants at nursery dealers in Brown, Rock, and Winnebago Cos.

Bronze birch borer – Several crimson frost birch at a nursery dealer in Wood Co. were infested with this beetle pest.

Eastern tent caterpillar - Eastern tent caterpillars have emerged in the northeast region of the state and begun to build their web nests. Caterpillars are about 1/2 inch long and webs are generally small, roughly the size of a tennis ball. Price Co. has had caterpillars hatching and developing to 5-6 mm long. (DNR and UW-EX). See also **FRUIT**



European pine sawfly – Larvae were still small (approx. one fourth inch) on a mugo pine at a commercial site in Dane Co.



Forest tent caterpillar - Forest tent caterpillars have emerged in the northeast region of the state. Caterpillars in

the northern counties are patiently waiting for the aspen leaves to expand. (DNR)

Spiny witch-hazel aphid – Light amounts of this insect were found on river birch at a nursery dealer in Winnebago Co.

Spruce spider mite – Light to moderate numbers of mites were observed on arborvitae at nursery dealers in Rock Co.

Spruce needle miner – Light amounts of damage were seen on blue spruce at a nursery dealer in St. Croix Co.

Thrips – Numbers were light to moderate on verbena and mums at several nursery dealers in Rock Co.

Botrytis – Infections were light to moderate on geraniums, begonias, and new guinea impatiens at nursery dealers in Manitowoc, Rock and Winnebago Cos.

Cankers – Cankers were found on dogwood, crabs, maples, honeylocust and poplar at nursery dealers in Sauk and Wood Cos.

Cladosporium leaf spot – A few peonies had light amounts of leaf spotting caused by this fungus at a nursery dealer in Dunn Co.

Crown gall – One skookum rhododendron was found with a large gall at a nursery dealer in Rock Co.

Impatiens necrotic spot virus – Plants affected by this virus at a nursery dealer in Wood Co. include impatiens, new guinea impatiens and tuberous begonia.

Frost damage – Light to heavy amounts of damage were reported on hosta, wintercreeper, little gem spruce, Japanese maple and lilac at nursery dealers in Rock, Sauk, Winnebago and Wood Cos.

Rose mosaic virus complex – Hybrid tea roses and one shrub rose were found infected with this virus complex at nursery dealers in Dunn, Eau Claire, Rock and St. Croix Cos.

Viruses – Unknown viruses were observed on peony and bleeding heart in Eau Claire Co., and on bleeding heart in St. Croix Co.

White pine blister rust - fungal fruiting was observed on white pine branches. (DNR)

Non-hardy nursery stock – Non-hardy rhododendrons and evergreen azaleas were found at nursery dealers in Eau Claire, Rock, Sauk and St. Croix Cos. Flowering dogwood, *Cornus florida*, was taken off sale at nursery dealers in Eau Claire, Manitowoc and Rock Cos.

STATE/FEDERAL PROGRAMS

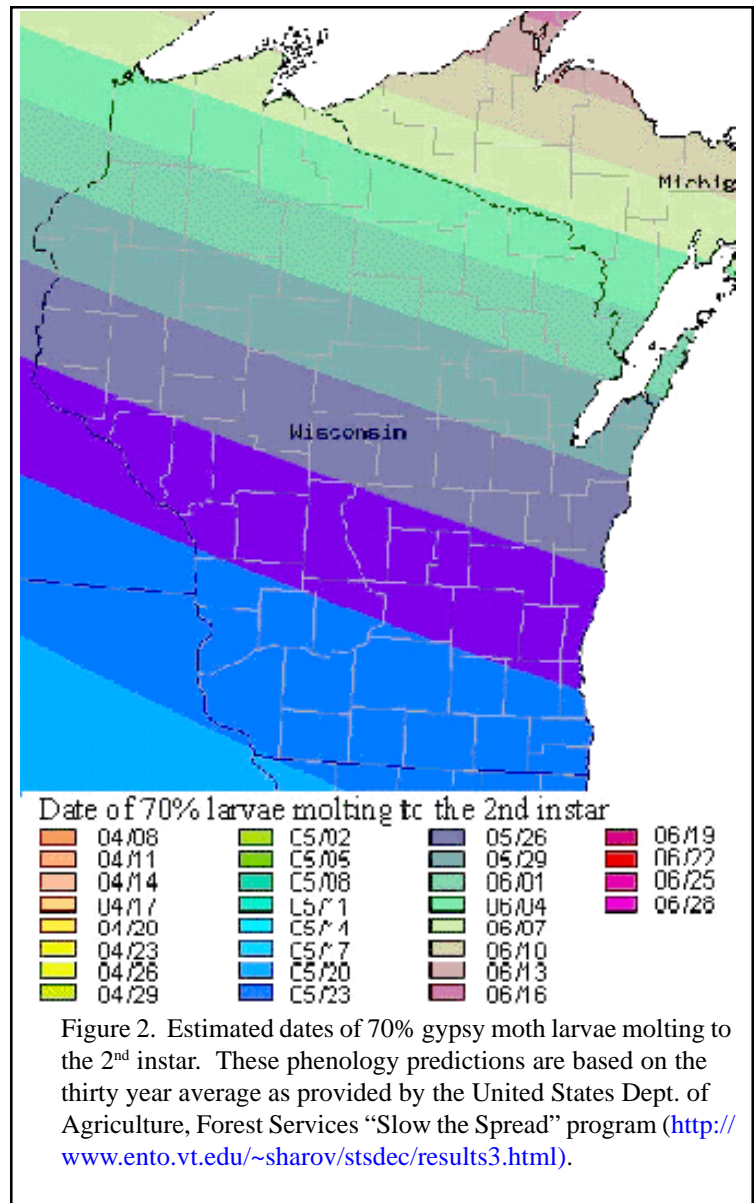
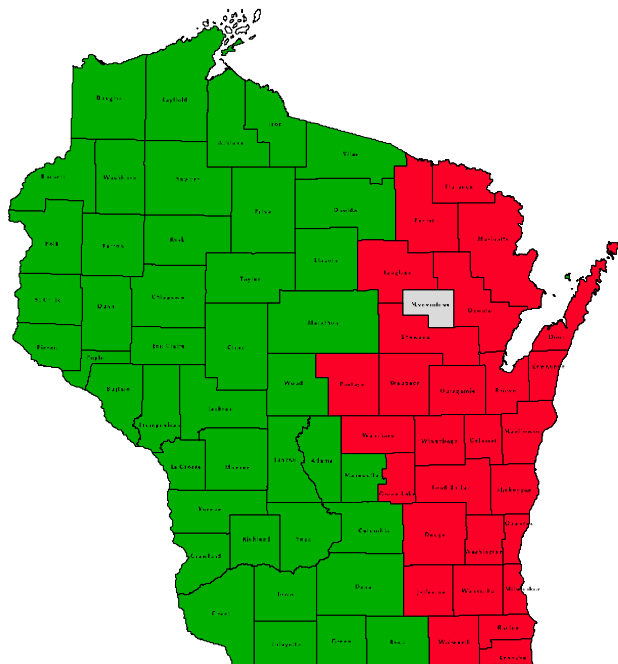
GYPSY MOTH PROGRAM - Lead worker training has been held for this trapping season. Lead workers were trained in GPS usage, downloading procedures, trapper training, data reporting, trap setting, checking, and takedown procedures, landowner contacts, and safety.

Trapper training will be held the week of May 20, 2002 in Madison and Tomahawk.

Trapping will begin on May 28, 2002. The general trapping plan calls for most of the state to be trapped at 1 trap per 2 sq.



Wisconsin Cooperative
Gypsy Moth Program
2002 General Trapping Plan



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.

miles while the regulated counties in eastern Wisconsin will be trapped at 1 trap per 4 sq. miles. Delimitation sites will be trapped at 4 traps per sq. mile or 1 trap per sq. mile. See map. We appreciate landowner cooperation for allowing us to set traps on private property.

For more information on the GYPSY MOTH PROGRAM,

Table 1. Gypsy moth egg hatch reports in Wisconsin[†].

County	Date	Percent egg hatch
Columbia	5/6/02	0 to 75%
Dane	5/6/02	0 to 25%
Ozaukee	5/7/02	10 to 25%
Outagamie	5/7/02	0 to 50%
Waukesha	5/7/02	10 to 20%

[†] Various WI DATCP and DNR personnel surveyed selected gypsy moth hot spots with numerous egg masses.

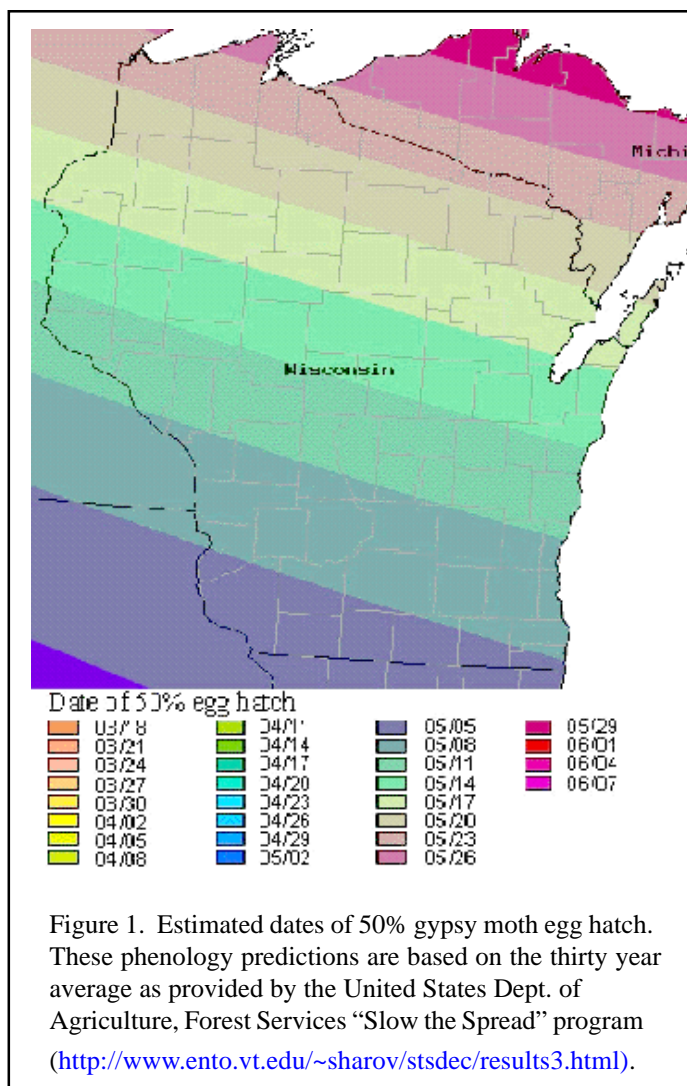
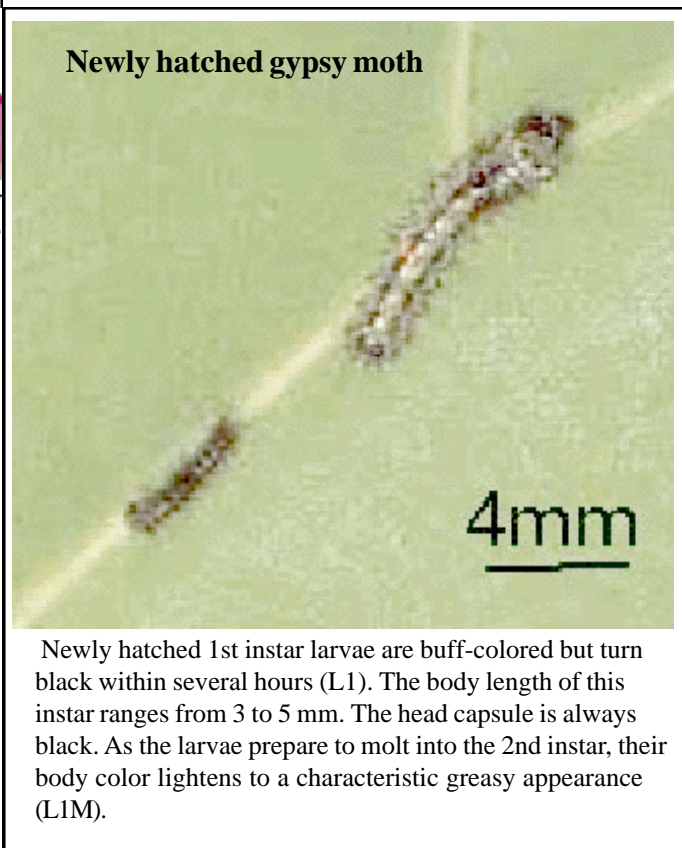


Figure 1. Estimated dates of 50% gypsy moth egg hatch. These phenology predictions are based on the thirty year average as provided by the United States Dept. of Agriculture, Forest Services “Slow the Spread” program (<http://www.ento.vt.edu/~sharov/stsdec/results3.html>).

Gypsy moth egg masses are beginning to hatch throughout the state as of Monday, May 6. Figure 1 illustrates the predicted date for 50% egg hatch for Wisconsin while Figure 2 provides dates for 70% of larvae molting into the second instar. Another model that uses current year’s weather conditions can be found at (<http://www.soils.wisc.edu/wimnext/tree/gyps moth.html>).

Larvae begin to hatch and can be seen on the egg mass itself. Several observers throughout the state have noted a wide range of percent that have hatched (Table 1). The “Slow the Spread” and the “Suppression” programs are tentatively scheduled to start spraying Btk on May 20th and will hopefully finish with the northern most spray sites by June 6.

Gypsy moth Btk treatment maps for spring 2002 are now available on line at: http://datcp.state.wi.us/arm/environment/insects/gypsy-moth/map_index.html



Newly hatched 1st instar larvae are buff-colored but turn black within several hours (L1). The body length of this instar ranges from 3 to 5 mm. The head capsule is always black. As the larvae prepare to molt into the 2nd instar, their body color lightens to a characteristic greasy appearance (L1M).



FRUIT

Spotted tentiform leafminer – Escalating moth activity stimulated by warmer weather conditions, means the peak of the 1st flight of moths, which normally occurs around 150 DD (base 50°F) has, or will soon be occurring at a number of our sentinel trapping sites. Counts of 1400 and 1458 at orchards near Mequon and Rochester indicate peak flight is occurring in the southeast. Scouting for leaf mines to determine the level of infestation, and the need for spray should begin approximately one week after peak adult flight.

Eastern tent caterpillar – 2nd instar larvae were observed

feeding in a small tent (~3 inches x 1 inch) in Lafayette Co. Numerous tents, ranging from 2-6 inches in length, were observed in small wild cherry trees along roadsides in the southwestern region of the state. See also **FOREST, SHADE TREE, ORNAMENTALS AND TURF**

Orchard Observations – Apple insect trappers, we welcome your observations. Here’s what some of our cooperators had to say this week:

Trempealeau Co. – Blossoms beginning to open. Very light bloom on red delicious.

Richland Co. – Early variety apple blossom just starting.

Dane Co. – Trees full blossom. Rain was light.

Sheboygan Co. - McIntosh at pink

Milwaukee Co. - We are at pink on most apple varieties, with full bloom on pears, sweet cherries, and plums.

Racine Co. - Macs are at about 50% full bloom

Apple Scab — The weather continued cool this week, keeping **apple scab** ascospore development slow. All cooperators in the network have accumulated the necessary Growing Degree Days to expect 5% of spores mature (and thus have the risk of infection, given suitable environmental conditions). The development model predicts that 5% of the spores are mature and ready for release at 147 GDD (base 32), and that 100% of the spores are mature and ready for release at 910 GDD. Apple growers throughout the state should be taking appropriate action to control scab at this time. For recommendations on control, consult the UWEX Commercial Tree Fruit Spray Guide (Ext. Pub. A3314, available from your county agent or UW Extension Publications). See table for apple development.

Information throughout the week on cooperator degree day accumulation and near-real time interpolated degree day maps are available at <http://www.soils.wisc.edu/cgi-bin/aws/scabsummary>

Apple Development				
Orchard	green tip	latest report	accumulated GDD(base32)*	development stage
Racine	4/15	5/9	502	50% bloom
Prairie du Chien	4/15	5/6	425	bloom
Fond du Lac	4/15	5/6	435	pink
Sheboygan	4/15	5/9	400	pink
Pierce	4/17	5/9	253	tight cluster
Door	4/20	5/7	178	tight cluster

*from Mac green tip

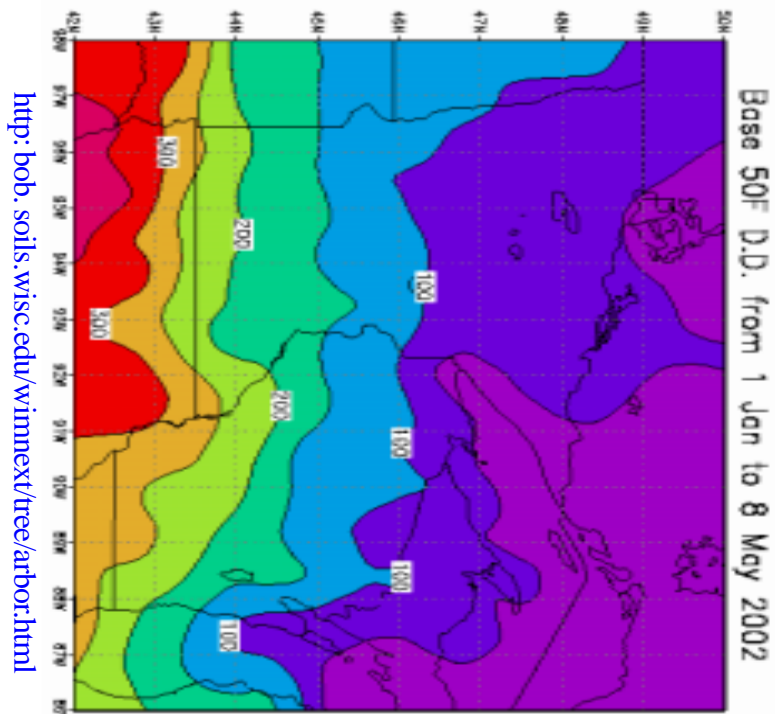
Apple Insect Trapping Results

County	City	Date	STLM	RBLR	CM	OBLR
Grant Co.						
Sinsinawa		5/1-5/8	1	6	0	
Richland Co.						
Hill Point		4/30-5/6	155	23	0	
Dane Co.						
Deerfield		4/30-5/7	485	18	0	7
Green Co.						
Brodhead		5/1-5/8	150	26		
Pierce Co.						
Spring Valley		4/28-5/8	22	2	0	
Trempealeau Co.						
Galesville		4/29-5/6	480	0	0	0
Jackson Co.						
Hixton		4/30-5/6	620	6	1	
Fond du Lac Co.						
Rosendale		4/29-5/6	24	4	1	
Malone		4/29-5/6	20	13	0	
Adams Co.						
Oxford		4/29-5/6	319	46	0	0
Marquette Co.						
Montello		4/29-5/6	444	21	0	0
Sheboygan Co.						
Plymouth		4/30-5/8	285			
Ozaukee Co.						
Mequon		4/30-5/8	1400	45.5		
Racine Co.						
Rochester		5/2-5/9	1458	31	1	
Brown Co.						
Oneida		4/21-4/28	2	0	0	



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

Website of the Week:

<http://www.cdms.net/manuf/>

Crop Data Management System's collection of chemical labels and Material Safety Data Sheets (MSDS). Search for a variety of agricultural, turf and ornamental chemicals and print out use and safety information.