Wisconsin Department of Agriculture, Trade & Consumer Protection

Wisconsin Pest Bulletin

Your weekly source for crop pest news, first alerts & weather information for Wisconsin.

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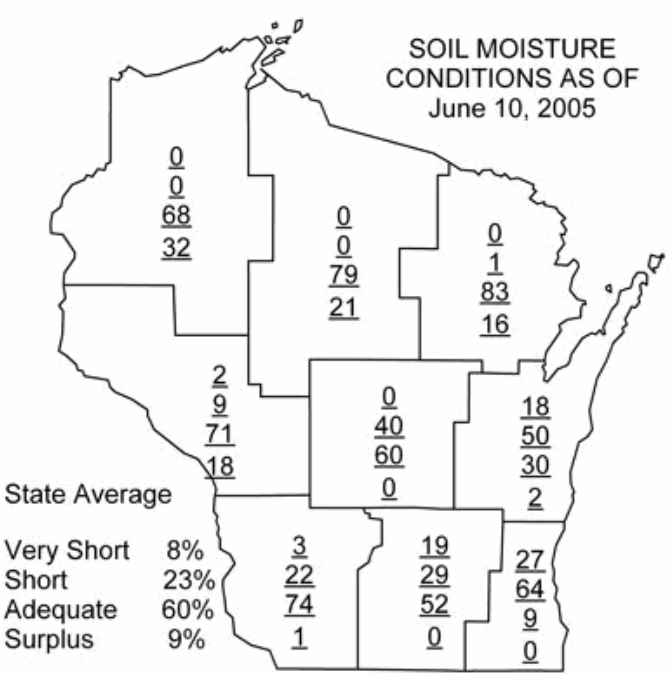
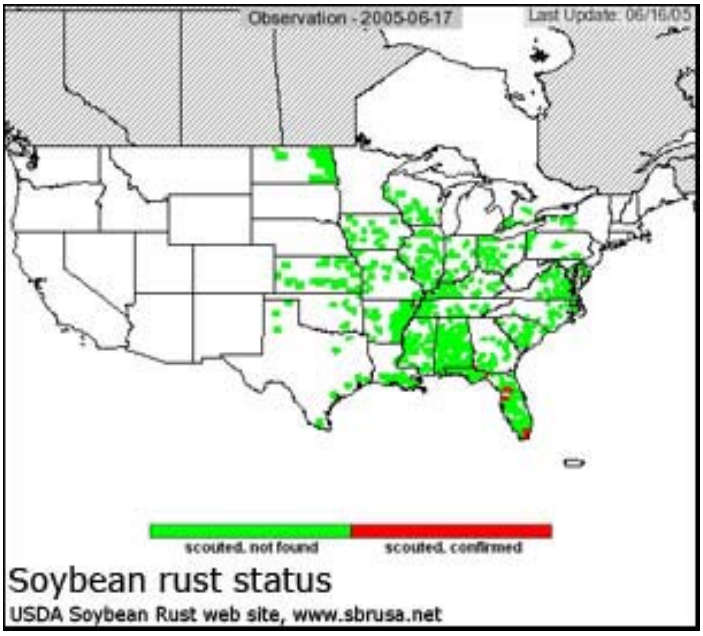


Source: Wisconsin Agricultural Statistics Service

Soil Moisture Conditions as of June 10, 2005
(Wisconsin Agricultural Statistics Service)



Status of Soybean Rust in the United States
USDA Soybean Rust web site
www.sbrusa.net

Weather and Pests

Heat and humidity levels turned from stifling to bearable in the past week. Daytime temperatures dropped into the 70s, a more reasonable level for mid-June. The balancing act between heat and moisture levels continues. In the northeast, a surplus of rain temporarily slowed haying operations, while in the southeast and portions of the south central districts, precipitation is urgently needed. The mid-week rainfall that dampened fields in various parts of the state may not have been substantial enough to carry fields through the dry spell that is forecast for the next two weeks.

In terms of pests, the insects couldn't hope for better conditions. Hot, dry weather favors the development of nearly all insect species. This week's surveys found low to moderate, still manageable populations of soybean aphids, potato leafhoppers and the like, but levels are sure to escalate rapidly in the week ahead. -- *Krista Lambrecht*

Growing Degree Days

Site		2004	Base	Base
	GDD*	GDD	48	40
SOUTHWEST				
Dubuque, IA	872	919	894	1538
Lone Rock	833	826	849	1462
SOUTH CENTRAL				
Beloit	869	885	889	1509
Madison	841	784	855	1481
Sullivan	859	805	849	1490
Juneau	836	758	833	1465
SOUTHEAST				
Waukesha	787	749	774	1399
Hartford	773	706	766	1385
Racine	696	671	726	1290
Milwaukee	686	639	692	1280
EAST CENTRAL				
Appleton	706	552	733	1272
Green Bay	626	486	658	1188
CENTRAL				
Big Flats	789	682	795	1383
Hancock	770	643	776	1355
Port Edwards	740	600	753	1307
WEST CENTRAL				
LaCrosse	850	816	884	1502
Eau Claire	772	647	817	1380
NORTHWEST				
Cumberland	641	487	671	1201
Bayfield	397	327	399	871
NORTH CENTRAL				
Wausau	662	511	674	1190
Medford	627	475	651	1158
NORTHEAST				
Crivitz	588	437	604	1122
Crandon	599	427	595	1092

Looking Ahead

European corn borer - The most opportune treatment window for first generation corn borer larvae has opened in southern and west central counties where 800 GDD50 have accumulated. Scouting efforts for egg masses and first generation larvae should be underway in corn that is 18 inches or taller and continue through 1000 GDD50. This week's surveys in central Wisconsin found virtually corn borer-free fields.

Soybean aphid - More infested fields were found this week, along with a minor increase in aphid densities. Infestations affecting an estimated 10-30% of the plants were encountered in central and southwest counties, though the numbers of aphids per plant were still relatively low, ranging from 2-16. The weather forecast for next week promises ideal conditions (hot and dry) for aphid populations to build. Bill Halfman, Monroe Co. Agent, provided an appropriate recommendation, "the only action justified at this time is further monitoring." Check new growth, particularly unfolding trifoliates, first.


Soybean aphids (winged forms)
Dave Voegtlin, Illinois Natural History Survey

Potato leafhopper - Nymphs have grown only slightly more common in the past week. A few turned up here and there in the south; none were swept from Adams, Marquette and Waushara Co. alfalfa fields. With temperatures on the rise and no thunderstorms in the forecast, growers should be alert to the possibility of population explosions in forage crops and other hosts as nymph reproduction accelerates in the week ahead.

Bean leaf beetle - Results from the survey for overwintered bean leaf beetles are in. Beetles were collected from 52 of 202 survey sites in the southern one-third of the state. Individual beetles from 51 sites tested negative for Bean Pod Mottle Virus (BPMV); a single beetle from a Rock Co. alfalfa field tested positive for the virus. See **SOYBEAN** section for more details and the implications of these results.

Corn earworm - The first corn earworm moths of 2005 were reported at Sturtevant and Viroqua this week. Pheromone trap catches ranged from two to seven moths. A capture of 5-10 moths per night may warrant treatment in silking fields. The timing on sweet corn is critical since larvae quickly develop and move into the ear where they are no longer susceptible to insecticides. For more treatment information, see UW-Extension bulletin A2655: *The Corn Earworm*.

Corn rootworm - Our neighbors to the south reported significant injury to corn roots in scattered fields throughout Illinois, where an estimated 50% larval hatch has already occurred. Here in the Badger State, larval hatch also is in progress. Based on degree-day accumulations (base 52°F, 4-inch soil profile), 50% of rootworm hatch is expected to occur after the accumulation of 684-767 GDD50 (*the Bulletin* No. 3 Article 3/June 17. Author: Kevin Steffey). Look for indicators of rootworm feeding between now and mid-July.

Jack pine budworm - Northwestern Wisconsin residents are in for the most severe jack-pine budworm blitz in the last decade. More than 100,000 pines in Bayfield, Burnett, Douglas, Washburn are at risk of attack. See **FOREST & LANDSCAPE** section for details.

Corn

European corn borer - The treatment window for first generation corn borer larvae is open in the south, wherever 800 GDD50 have accumulated. Treatments should be effective at least until June 22 near Beloit, Lone Rock, LaCrosse and Madison, as long as first generation larvae are feeding inside the whorls where they are susceptible to insecticides. Once larvae reach the third instar and begin tunneling into the stalks, effective control is difficult to achieve.

Scouting for shot-hole feeding damage and larvae in the next two weeks is critical to making timely and effective management decisions. Sample five sets of 20 plants for every 40 acres in a field, continuing this routine every three to five days until insecticide treatment is warranted or scouting shows population does not require treatment. For each sampled plant, detach the upper five to seven leaves of the whorl from the rest of the plant, then unwrap the leaves to examine them for larvae or larval feeding. Larvae may be in the midribs of leaves as well, so look closely. Record both the number of plants infested and the number of live larvae found.


ECB feeding injury
K. Lambrecht, WI DATCP

The approximate economic threshold in field corn for first generation corn borers is when larvae are present and recent feeding is observed on 50% or more of the plants. The threshold for fresh market sweet corn is necessarily much lower; one egg mass per 10 plants is commonly used. An insecticide should be applied when the first black-head or hatched eggs are observed. For information on management of European corn borer in sweet corn visit http://www.hort.wisc.edu/FreshVeg/Managing%20Sweet%20Corn%20Worms.doc. --*Krista Lambrecht*

Corn earworm - In the past week, seven corn earworm moths were captured at the Vernon Co. pheromone trapping site, and two were reported from Racine Co. The arrival of these moths is somewhat earlier than usual. Normally a few adults arrive in late June, and the more damaging second generation arrives in late August. Early pest activity seems to be the norm lately, and it would not be surprising if the August generation occurs earlier than usual. Since field corn

is not yet silking, damage done by the larvae of the early migrating corn earworms will be minimal; however, early-planted sweet corn should be monitored. Treat if three adults/black light traps are captured in two to three consecutive nights, or if five to ten moths are caught per pheromone trap. -- *Rachel Klein-Koth*

Armyworm - Although only light activity has been noted so far this season, continue to scout for armyworm damage in the weeks ahead as the second flight begins. In Wisconsin, the largest numbers of moths generally appear in July. These moths sometimes give rise to an abundance of larvae.

UW-Extension recommends the following procedure for scouting for armyworm in corn:

Take at least 10 random samples of 20 plants and record the number of damaged plants. Note the number of rows severely damaged, the abundance of worms already in the field, and most importantly, the number of larvae still in the adjacent field or fence row serving as the source of the infestation. If the number of armyworms suggests possible defoliation of more than three rows, treat the outer 8-10 rows on that side of the field and the area giving rise to the infestation (UW-Extension publication A3327-*The Armyworm*). For additional information on economic thresholds and control, see UW-Extension publication A1684-Pest Control in Corn. -- *Krista Lambrecht*

Corn rootworm - Damage caused by larvae feeding on corn roots should grow visible in the very near future, and scattered problem areas are expected to crop up this season. Growers who suspect heavy corn rootworm pressure in their fields should plan to assess the extent of larval damage in the next two to four weeks. Surveying for root damage is most effective during the first two weeks of July, when injury is expected to be nearing the maximum for the season. -- *Krista Lambrecht*

Stalk borer - Some central and south central fields are showing signs of worsening stalk borer infestations. Infestations ranging from 3%-17% were detected in Dane Co. fields, and a small number of Adams Co. fields had 2%-21% infestations. Larvae in these counties were predominantly in the third and fourth instars. -- *Krista Lambrecht*

Stalk borer injury
Marlin E. Rice, Iowa State University

Forages

Potato leafhopper - Despite highly favorable weather conditions, potato leafhopper populations remain low. Sweep net samples in Adams, Marquette and Waushara Co. fields found no more than seven adults per 10 sweeps. Counts were mostly below four to five adults per 10 sweeps. While nymph production has been in progress since June 7 in the south, leafhoppers are apparently less inspired to begin making nymphs in the central counties. The heat and humidity expected in the week ahead will undoubtedly stimulate reproduction. Dust off the sweep net. Monitoring the increase in leafhopper levels in the week ahead is imperative. -- *Krista Lambrecht*

Alfalfa weevil - Numbers are down considerably in second crop regrowth due to pupation, but fields in the central and northern regions still face the possibility of moderate to heavy tip-feeding injury. Surveys in the central district this week found very few larvae (<5 larvae per 10 sweeps) and low levels of tip feeding (<10%). Continue to check regrowth for larvae and tip feeding. -- *Krista Lambrecht*

Meadow spittlebug - Familiar spittle masses have all but disappeared, and the once sedentary nymphs inside are now full-grown, active adults. After leaving their spit shelters, the adults may continue to occupy alfalfa fields during the summer months; however, they do not feed and are basically inconsequential for the duration of the season. Look for the spittle masses to return next April or May, as there is only one generation of spittlebugs per year in Wisconsin.

Pea aphid - Counts have risen somewhat since last week. Higher populations were detected in fields near Mazomanie in Dane Co., ranging from 6-17 per sweep compared to 5-8 per sweep last week. In Adams and Marquette Co. fields, sweep net counts were low, numbering fewer than 3.2 aphids per sweep. Winged, non-winged adults, and nymphs were present in all fields surveyed. -- *Krista Lambrecht*

Soybeans

Soybean rust - Jefferson County, Florida, reported a new find of soybean rust on kudzu. This is the fifth county in Florida that has reported soybean rust, though all are on kudzu. Seminole County in Georgia remains the only county with rust on soybean, and it was found on volunteer soybean plants in two locations. Numerous fields have been scouted from Kansas to Delaware, and Florida to North Dakota and Canada. Potential new infections could occur on non-soybean or soybean plants in the Southeast. The impact of Arlene will not be known for 7 to 14 days. Additional spore monitoring through spore traps and ground observations of soybean and other hosts will indicate whether Arlene played a role in movement of rust spores. -- information from USDA Soybean Rust Site, www.sbrusa.net, updated 6/15/05

Bean leaf beetle - Survey results are in. Laboratory analyses of overwintered bean leaf beetles collected from 51 of 204 survey sites between May 4 and June 1 found bean pod mottle virus (BPMV) in a single beetle collected from a Rock

Co. alfalfa field; bean leaf beetles from 50 fields tested negative for BPMV.

Considering that was BPMV was not detected in Wisconsin soybean fields last summer, these findings come as no surprise. Essentially there was little or no BPMV inoculum for the beetles to pick up and retain throughout the winter months. During seasons when the incidence of BPMV is high, more beetles presumably take up the virus, carry it through the winter, and transfer it to newly emerged soybeans the following spring (we think). The intricacies of this insect-plant-virus interaction are not well understood, and it remains unclear whether the BPMV which overwinters in the gut of some bean leaf beetles can be spread to soybean plants the following spring.


Bean leaf beetle defoliation
Purdue University

Still, DATCP plant pest specialists view the monitoring of bean leaf beetle and BPMV activity from season to season as important, even in years when beetles are few in number and BPMV is non-existent. In the scheme of things, both pests are new to our state and deserve our close scrutiny. This week's lab findings should be considered good news for soybean growers who are now free to worry about more substantial pest threats than early-season BPMV transmission. -- *Krista Lambrecht*

Soybean aphid - The focus of attention and survey efforts has shifted to soybean aphid for the time being. Aphid densities are on the rise in Wisconsin fields, but populations remain mostly low for now.

Currently aphids are actively increasing at a moderate pace. Aphid densities per plant were not much higher this week, but more infested fields were detected. A field near Dodgeville in Iowa Co. had aphids on 10-20% of the plants with aphids, while no aphids were found in a field in Cobb. The highest density of aphids in the infested field was six per plant. Fields surveyed in northern Columbia, Adams and Marquette Cos. were 20-30% infested, with no more than 16 aphids per plant.

In the June 16 edition of the *Wisconsin Crop Manager*, Eileen Cullen reported that 96% (23 of 24) of the experimental soybean plots at Arlington research station were infested with 0.15-6.35 aphids per plant. At the West Madison research station, 100% of the study plots were infested with 0.40-56 aphids per plant. A small number of plants in the experimental plots had densities as high as 113 and 125 aphids per plant. Eileen's crop consultant connections reported average densities of 20-60 aphids per plant in V2-V3 soybean fields. The highest average number of aphids per plant reported by a consultant was 150 aphids per plant. (*Wisconsin Crop Manager*, Vol. 12, No. 15, June 16. *Field Notes: Soybean Aphid on Seedling and Early Vegetative Soybeans*. Author: Eileen Cullen)

While aphid levels were not considerably higher this week, more fields are becoming infested as aphids continue to colonize soybeans. The key to effective management of soybean aphids in the coming weeks is to monitor the rate of population growth and determine when populations reach the action threshold of 250 aphids per plant. When scouting for soybean aphids, be sure to examine newly unfolding trifoliates first, as aphids tend to cluster on the newest growth initially. -- *Krista Lambrecht*

For UW-Extension Soybean Aphid Information and Management recommendations, visit:
University of Wisconsin Soybean Plant Health

Vegetables

Cabbage looper trapping network - According to a report from UW's Karen Delahaut, moths have appeared in both Wisconsin and Minnesota a few weeks early this year. Cabbage loopers typically don't make an appearance until July. Twelve moths were reported at the East Troy trapping site; none were captured this week in Dane, LaCrosse or Ozaukee Co. pheromone traps. Expect loopers to continue to blow in on strong winds from the south. -- *Rachel Klein-Koth*

Diamondback moth - Between May 6 and May 13, fifteen diamondback moths were caught in the Wausau black light trap. Now, nearly a month later, we can expect the second flight to emerge near Wausau and begin laying eggs on cole crops. Late-planted cole crops may have missed the egg laying period of the first generation, probably resulting in little damage by diamondback larvae. Growers in the north central area should scout cole crops weekly for larvae of diamondback. See UW-Extension Garden Facts Publication XHT1031 *Diamondback Moth* or the UW-Extension Publication A3584 *Growing broccoli, cauliflowers, cabbage, and other cole crops in Wisconsin* for thresholds and management information. -- *Rachel Klein-Koth*

Corn earworm -As mentioned in the CORN section, corn earworms moths arrived during the past week in Vernon and Racine Cos.. Usually injury attributed to this generation is minimal, while the more damaging generation appears in August. In addition to sweet corn, other hosts include tomato, lettuce, pepper and bean. -- *Rachel Klein-Koth*

Variegated cutworm -A black light catch of 56 moths near Janesville suggests variegated cutworms are mating and laying eggs in that area. In the April 22 edition of the Pest Bulletin, it was stated that variegated cutworms migrate to Wisconsin from gulf coast states; however, according to the UW-Extension Vegetable Crop Scouting Manual, adults also emerge


Variegated cutworm
Missouri Extension

in early summer (now) after overwintering in the soil as pupae or larvae. Either way, the current activity should prompt growers, especially growers of beets, in the Rock Co. area to begin scouting for damage in the next two weeks.

The host range is wide and includes vegetables (preferably beets), fruits and field crops; however, economic damage to any of these crops is rare. If young plants have been cut or if feeding damage is observed on older plants, then use the following scouting procedure: Shake five foot sections of two adjacent rows into the furrow. Count the larvae that fall to the soil surface and divide this number by five--this is number of worms per foot row. Repeat the process in four other areas throughout the field and calculate the average. If it is early in the season, control measures are recommended if the cutworm counts exceed four per row foot as a field average. In late summer, control measures are recommended if the cutworm counts exceed eight per row foot as a field average. *-- Rachel Klein-Koth*

Spotted cutworm - Black light captures have doubled in the past week near Lancaster, Marshfield and Sparta. Although the spotted cutworm is rarely a pest of economic concern, growers in these areas who notice cut plants or feeding damage, should keep this pest in mind as a possible culprit. Scout by shaking plants and observing any larvae that fall to the ground. Spotted cutworm larvae are dark-colored, smoothed-skinned and have wedge-shaped black dashes on each segment. *-- Rachel Klein-Koth*

Armyworm - Right on schedule, the second flight of armyworms is underway in most areas of the state. According to black light catches, the first moths migrated into the state between May 7 and May 13. The larvae of the first flight fed for three to four weeks, pupated, and now, just over a month later, have begun to emerge as adults. Armyworm is a common pest of corn and small grains, an occasional pest of potato, and a potential contaminant of pea. *-- Rachel Klein-Koth*

Cabbage maggot - The second generation of flies will occur at 1476 GDD43. Through Wednesday June 15, according to the Wisconsin-Minnesota Degree Day Calculator, 1068 GDD43 have accumulated in Racine Co., 1240 GDD43 in Dane Co., 1207 GDD43 in La Crosse Co., 1213 GDD43 in Waushara Co., and 978 GDD43 in Outagamie Co. Most of these areas could reach 1476 GDD43 next week. Growers can place yellow dishpans filled with soapy water along field edges to monitor the increasing population of this cole crop pest. Normally the second generation is less damaging than the first. *--Rachel Klein-Koth*

Onion maggot - The second generation of flies is expected to occur at 1950 GDD40. Through Thursday, June 16, Racine has accumulated 1290 GDD40, Madison has 1480 GDD40, La Crosse has 1501 GDD40, Hancock has 1331 GDD40, and Green Bay has 1164 GDD40. If warm weather continues, most of these areas will reach 1950 GDD40 in the next two weeks. Like the cabbage maggot, the first generation is usually more damaging than the second. Growers can begin to place yellow dishpans filled with soapy water along field edges to monitor the increasing population of this onion pest. *-- Rachel Klein-Koth*

Potato leafhopper - Because potato leafhopper is one of the most serious pest insects of potatoes in Wisconsin, it is important to know the economic threshold for this insect and how to scout for it in potato fields. Plants should be scouted by taking both a sweep net count to monitor the number of adults, and leaf counts to determine the number of nymphs. The recommendations for potato leafhopper control in Wisconsin are as follows: treatment is warranted when >1 nymph/10 leaves are present; when 0.5-1.0 adults per sweep are present, treat if populations persist for 10-14 days, or if nymphs are found.; when 1.0-1.5 adults per sweep are present, treat in 5-7 days or immediately if nymphs are found; when over 1.5 adults per sweep are present, treat immediately (Potato Production in Wisconsin). *-- Krista Lambrecht*

Tomato hornworm - Moths have begun to appear in black light traps, suggesting egg laying is also in the works. Hornworms are members of the sphinx or hawkmoth family (Sphingidae), and are primarily pests of tomatoes; however, they can attack eggplant, pepper, and potato as well. The damaging 3 ½-4 inch pale green larvae feeds on the leaves and stems of the tomato plant and leaving behind dark green or black droppings. If hornworms are present they are generally quite noticeable. Handpicking is an effective control in small gardens. *-- Krista Lambrecht*

Colorado potato beetle - Overwintered adults, eggs, and first and second instar larvae are present in potato plantings. Growers should spray NOW to control the early instar larvae and protect the crop. Foliar neonicotinoids (Actara or Provado) are recommended if Admire or Platinum were not used at planting and if Cruiser or Genesis were not used as a seed treatment. Other options are novaluron (Rimon), abamectin (Agrimek), or spinosad (SpinTor or Entrust). *-- Karen Delahaut, UW Fresh Market Vegetable Coordinator*

Seed corn maggot - Reports of third generation flies at their peak have come in from southern Wisconsin. Peak emergence is at 1000 GDD39 and in Madison, we're at 1400 GDD39. *-- Karen Delahaut, UW Fresh Market Vegetable Coordinator*

Aster leafhopper - Aster Yellows infectivity rates are still hovering around 2-3%. To be conservative, growers should use the following thresholds when deciding when to treat

various crops: susceptible carrot varieties = 10 ALH/100 sweeps; resistant carrot varieties & potato = 25/ 100 sweeps; celery = 9/100 sweeps; and onion = 6/100 sweeps. For more information on the aster leafhopper and aster yellows, visit http://cecommerce.uwex.edu/pdfs/A3679.PDF. -- *Karen Delahaut, UW Fresh Market Vegetable Coordinator*

Fruit

Apple maggot - Emergence of apple maggot adults has not yet been documented, but may be anticipated as we approach 900 GDD50. If current hot, dry weather persists, emergence may be delayed until adequate moisture levels are attained. Research has demonstrated that soil moisture of 20% is most favorable for the emergence of apple maggot flies. While emergence might get a late start this season, growers should place red ball and yellow sticky over the weekend if they have not already done so. -- *Krista Lambrecht*

Redbanded leafroller - This week's low pheromone trap captures ranging from 0-4 moths suggest the second flight is not yet in progress, although this flight usually gets underway once 780 GDD50 have accumulated. Growers in the southern and west central parts of the state, where this point has been surpassed, should look for pheromone trap counts to increase shortly. -- *Krista Lambrecht*

Codling Moth - Based on the degree day model available for codling moth, egg hatch is at least 50% complete as far north as Appleton, where 713 GDD50 have been reached. The second flight of moth, currently in progress, is expected to continue through 1296 GDD50. Above-threshold moth captures were recorded again this week near New Berlin and Raymond in southeastern Wisconsin. As a reminder, a capture of five or more moths in a week's time in any one trap warrants control. -- *Krista Lambrecht*

Gypsy Moth

GYPSY MOTH PROGRAM - As of June 15, trappers have set 18,695 (49%) of the expected total number of traps. Nineteen counties have been completed: Adams, Brown, Calumet, Dodge, Kenosha, Kewaunee, Manitowoc, Marinette, Ozaukee, Pepin, Portage, Rock, Sheboygan, Walworth, Washington, Waukesha, Waupaca, Waushara, and Winnebago. Many trappers are finishing up their regular grid traps and working on their delimitation traps. These are traps set at a higher density, four or nine traps per square mile, to evaluate treatment blocks or to help define a possible infestation. Trap setting will continue for the next two to three weeks and most traps should be up by the week of July 4. Gypsy Moth larva will start pupating around the first part of July. This part of the life cycle lasts approximately 10-14 days. Adult moths begin to appear in mid-July, depending on how hot or cool the weather has been. Hot weather causes the life cycle to proceed faster than cool weather.

If you have any questions about the GYPSY MOTH PROGRAM, please call our hotline at 1-800-642-MOTH or visit the DATCP Gypsy Moth website.

6/15/2005 COUNTY	Total Traps Expected	# of Traps Set	% Complete	Counties Complete
Adams	170	157	92%	X
Ashland	1186	757	64%	
Barron	918	544	59%	
Bayfield	2053	1035	50%	
Brown	78	78	100%	X
Buffalo	748	467	62%	
Burnett	840	621	74%	
Calumet	30	30	100%	X
Chippewa	1070	401	37%	
Clark	1829	944	52%	
Columbia	195	0	0%	
Crawford	771	312	40%	
Dane	325	238	73%	
Dodge	100	99	99%	X
Door	47	20	43%	
Douglas	1397	585	42%	
Dunn	955	537	56%	
Eau Claire	1354	697	51%	
Florence	62	47	76%	
Fond Du Lac	82	0	0%	
Forest	112	0	0%	
Grant	1386	495	36%	
Green	625	173	28%	
Green Lake	40	0	0%	
Iowa	1324	338	26%	
Iron	830	266	32%	
Jackson	1718	890	52%	
Jefferson	64	0	0%	
Juneau	199	28	14%	
Kenosha	31	31	100%	X
Kewaunee	35	35	100%	X
LaCrosse	589	211	36%	
Lafayette	751	295	39%	
Langlade	95	15	16%	
Lincoln	225	102	45%	
Manitowoc	68	68	100%	X
Marathon	396	180	45%	
Marinette	164	164	100%	X
Marquette	51	0	0%	
Menominee	40	0	0%	
Milwaukee	49	27	55%	
Monroe	1372	761	55%	
Oconto	112	7	6%	
Oneida	279	231	83%	
Outagamie	72	0	0%	
Ozaukee	28	28	100%	X
Pepin	243	243	100%	X
Pierce	609	234	38%	
Polk	934	703	75%	
Portage	98	98	100%	X
Price	1476	751	51%	
Racine	39	34	87%	
Richland	694	211	30%	
Rock	250	234	94%	X
Rusk	969	635	66%	
St.Croix	736	375	51%	
Sauk	756	184	24%	
Sawyer	1300	556	43%	
Shawano	100	34	34%	
Sheboygan	61	61	100%	X
Taylor	1291	790	61%	
Trempealeau	753	426	57%	
Vernon	1174	230	20%	
Vilas	217	0	0%	
Walworth	64	64	100%	X
Washburn	843	545	65%	
Washington	48	48	100%	X
Waukesha	64	64	100%	X
Waupaca	84	84	100%	X
Waushara	72	72	100%	X
Winnebago	51	51	100%	X
Wood	204	54	26%	
TOTALS	**37995**	**18695**	**49%**	**19**


Gypsy moth pupa
M. Cady, WI DATCP

Forest and Landscape

Jack pine budworm - The WDNR is alerting Northwestern Wisconsin residents to the potential for one of the worst jack pine budworm attacks in recent history. Approximately 100,000 acres of jack pine forest are on the menu in Bayfield, Burnett, Douglas and Washburn Cos.

Budworm larvae consume and clip pine needles, preferring mature pines to younger ones. Jack pines 35 years and older are particularly appetizing. Dense populations can cause extensive defoliation, even tree mortality in some instances. Affected trees have dried, orange needles and appear to be scorched.

Outbreaks of jack pine budworm are cyclical in nature, occurring every 10-12 years. While severe defoliation now appears imminent, residents are reminded that the jack pine budworm is a native pest. In the long-term, occasional budworm outbreaks help to thin out and regenerate jack pine stands. WDNR foresters expect populations to decline naturally, and have no plans to spray public lands. In the short-term, residents and vacationers are in for a budworm blitz. For more information regarding the budworm situation, visit DNR News. -- *Krista Lambrecht*

European pine sawfly - Populations of the European Pine Sawfly, *Neodiprion sertifer*, have been observed scattered throughout southeastern and northeastern Wisconsin. This insect feeds in small colonies on red, white, jack, Austrian and Scotch pines. Feeding is limited to last year's needles, thus trees infested for the last two years will typically contain only current year's needles. Mortality of affected trees can occur if defoliation of all one-year-old needles occurs for two or more years. This insect is in its last instar and is beginning to pupate. More information can be obtained through the University of Minnesota Center for Urban Ecology and Sustainability website. -- *Jane Cummings-Carlson, WI DNR*

Downy mildew - This fungus was confirmed on cranesbill "New Dimension", a perennial geranium at a nursery grower in St. Croix Co. Symptoms were angular leaf spots turning off colors on the leaf surface with fuzzy fruiting bodies on the underside of leaf.

Apple scab - Moderate amounts of scab were found on 'Robinson' and 'Coral Burst' crabapples at nursery dealers in Ozaukee and Waukesha Cos.

Spruce needle drop - This malady was observed on Colorado spruce at a nursery dealer in Door Co.

Hosta virus X - This virus was observed on numerous hosta varieties at nursery dealers in Door and Pierce Cos.

Weir's cushion rust - This fungal disease was found on Colorado spruce at a nursery dealer in Bayfield Co.

Guignardia leaf blotch - This fungal leaf pathogen was observed on red horsechestnut at a nursery dealer in Ozaukee Co. in heavy amounts.

Daylily leaf streak - Light to moderate amounts of this disease were found on various daylily varieties at nursery dealers in Kenosha and Milwaukee Cos.

Rust - A rust disease on May-apple was found at a nursery dealer in Ozaukee Co. Rust symptoms appear on new growth in early spring. The stems as well as the leaves can be infected by this fungus and defoliation of the entire plant can occur. This disease occurs on both wild and cultivated May-apple.


Mayapple rust symptoms
B. Dahl, WI DATCP

Powdery mildew & black spot of rose - Moderate amounts of both of these diseases continue to be found on roses at nursery dealers this week in Calumet, Eau Claire, Kenosha, Milwaukee, Ozaukee and Waukesha Cos.

Rose slug - To add insult to injury, 2005 looks to be a good year for this pest that first skeletonizes, then completely devours entire leaves of rose plants. Light to moderate amounts were found at nursery dealers in Door and St. Croix Cos. Moderate to heavy amounts were reported by some homeowners in Dane Co. Insecticides may be used to control the larvae but soapy water sprayed on the larvae would do equally well. Remember that this insect is really a sawfly and would be unaffected by Bt products such as Dipel.

Ash leaf curling aphid - This aphid was found in moderate numbers on 'Patmore' green ash at nursery dealers in Eau Claire and St. Croix Cos.

Spider mites - Roses, morning glories and verbascum were found infested with moderate to severe amounts of this tiny pest at nursery dealers in Door, Eau Claire and Waukesha Cos. Two-spotted spider mite enjoys hot, dry weather and can reproduce rapidly under those conditions.

Viburnum shoot tip borer - This mining sawfly pest of nannyberry was found at a nursery dealer in Price Co. Symptoms of this pest include the dieing of leaves near the tips of shoots. Superficially it looks like a disease is affecting the shoots. Careful examination of the shoot tip will reveal a tiny S-shaped larva mining down the center of the shoot. No controls are normally needed and there is little information on the life cycle of this insect.

Pest Survey Hotline

Pest Survey Hotline - The Pest Survey Hotline (1-800-462-2803) was by no means ringing off the hook this week, but several calls concerning the same two pests--**emerald ash borer** and **white-spotted pine sawyer** (an Asian longhorned beetle look-alike)--were received, prompting this brief report. To help residents accurately identify these insects, a quick review of both wood-boring beetles is provided below.

Emerald ash borer (*Agrilus planipennis*) - By now, nearly all Wisconsin Pest Bulletin readers have heard of this highly destructive, exotic pest insect of ash trees, ***though it has not yet been found in our state***. Since first discovered in an industrialized part of Detroit during the summer of 2002, emerald ash borer has killed more than 10 million ash trees in southeastern Michigan and continues to impact ash trees in Indiana, Maryland, Ohio, Virginia and Windsor, Canada. Wisconsin has an estimated 628 million ash trees and ash tree resources that are currently at risk.

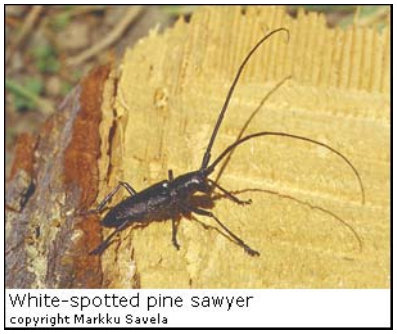
Residents, arborists, and nursery growers are urged to be alert to possibility of finding this ½-inch metallic green wood-boring beetle in Wisconsin this summer. Readers heading up to the cabin for the weekend with a load of firewood are particularly urged to inspect the wood, prior to transport. Movement of firewood is one very common way to accidentally spread this pest. Watch your ash trees and firewood, and please notify us if you observe a combination of the following symptoms:

- **Crown dieback**
- **Sprouting**
- **Bark splits**
- **D-shaped exit holes**
- **S-shaped galleries (made by larvae)**
- **Larvae or adults**

Before picking up the phone, be sure to confirm the presence of two or more of the symptoms listed above. Ash trees are susceptible to several maladies which cause dieback, sprouting or yellowing, such as drought, poor growing sites, native ash borer infestations, and the disease ash yellows. Also, there is a very common, native tiger beetle that is metallic green and should not be confused for the emerald ash borer adult. If symptoms are observed on a mountain ash there's no need to phone in. Mountain ash, *Sorbus americana*, is a member of the rose family and is not susceptible to emerald ash borer. The common name "ash" refers only to members of the genus *Fraxinus.*

If two or more symptoms are observed and an emerald ash borer infestation is strongly suspected, please call the **Pest Survey Hotline** at **1-800-462-2803**. For more information, readers should visit the DNR Emerald Ash Borer Site at **http://www.dnr.state.wi.us/org/land/Forestry/FH/Ash/.**

White-spotted pine sawyer (*Monochamus s. scutellatus*) - Calls to the hotline from residents who suspect seeing the Asian longhorned beetle are not uncommon, especially at this time of year when white-spotted pine sawyers are active. Callers rightly observed that this native wood-boring beetle bears a strong resemblance to the Asian longhorned beetle at first glance, but upon closer inspection, several differences may be noted. Both sexes of Asian longhorned beetle are glossy and usually have 20 irregular, but very well-defined white spots. The white markings in the white-spotted sawyer are patchy and less distinct. Also, white-spotted sawyers have a brassy, metallic caste, are smaller in size, and have a white scutellum (triangular spot at the base of the wings).



Sawyers are associated with stressed, dead or decaying conifers, while the Asian longhorned beetle is drawn to hardwood tree species.

The presence of white-spotted sawyers should not alarm residents. This beetle is common, abundant and occurs anywhere in Wisconsin where its coniferous hosts are available. The longhorned beetles often fly around residences on sunny days, sometimes alighting on decks, porches or on the sides of buildings to wait for mates.
-- *Krista Lambrecht*

Black Light Trapping Results

The buzz on black lights -As explained in the May 6th edition of the bulletin, Wisconsin has a network of cooperators monitoring black light traps for night flying insect pests. So how does a black light trap work anyway? The trap, shown below, consists of a tubular lamp placed vertically in the center of a metal panel. Below the lamp is a funnel which empties into a removable collection canister. The whole apparatus hangs from a sturdy beam or sits in a support ring with three legs. Moths fly to the light, bump into the panels, and then fall down the funnel and into the canister. A pest strip is usually placed in the canister to quickly kill moths in order to prevent a lot of damage to the wings, which can make a moth hard to identify. The collection canister is checked and emptied, preferable every other day. It is also a good idea to check a trap if rain is in the forecast. Rain can turn the contents of the canister into a very smelly "moth soup!"

So now we know how a black light trap works, but what is black light? Black light has a shorter wavelength than other colors of light. Night-flying insects can see shorter wavelengths of light, such as dark blue or near-black, better than longer wavelengths of light, such as red or yellow. Therefore night-flying insects are more attracted to the "black" light, provided by specially made "black light" lamps.
-- *Rachel Klein-Koth*

Trap Site	Date	ECB	TA	FA	BCW	DCW	SCW	VCW	WBCW	CabL	CelL	CEW
Southwest												
Lancaster	6/9-6/16	5	18	0	1	0	16	2	0	0	3	0
South Central												
Arlington	6/10-6/16	7										
West Arlington	6/10-6/17	8					2				3	
Mazomanie	6/9-6/16	10	9	0	2	0	8	0	0	0	3	0
West Madison	6/9-6/16	6	7	0	1	0	9	4	0	0	7	0
Southeast												
Janesville	6/10-6/15	33	91		6		11	56			16	0
East Troy	6/9-6/16	10			8	10				12		
Eagle	6/9-6/16	26	4				1	24			5	
West Central												
Sparta	6/9-6/15	9	2				24	2			5	
Chippewa Falls	6/10-6/16				2							
East Central												
Manitowoc	6/10-6/17	3	6	0	2	0	16	0	0	0	0	0
Central												
Wausau	6/10-6/14	1	3				19				4	
Marshfield	6/9-6/16	7	18	5	0	0	21	7	0	0	1	0
	6/2-6/9	5	14	5	1	0	6	8	0	0	5	0
Plover	6/9-6/15	3										
Plainfield	6/9-6/15	4										

ECB- European corn borer, TA- true armyworm, FA- fall armyworm, BCW- black cutworm, DCW- dingy cutworm, SCW- spotted cutworm, VCW- variegated cutworm, WBCW- Western bean cutworm, CabL- cabbage looper, CelL- celery looper, CEW- corn earworm

- Blank cells indicate species presence was not determined.

Apple Insect Trapping Results

	Date	STLM	RBLR	CM	OBLR	PC
Crawford Co.						
Gays Mills 1	6/6-6/13	50	0	8		
Gays Mills 2	6/2-6/8	5	0	7	2	
Iowa Co.						
Dodgeville	6/9-6/16	92	0	9	2	
Richland Co.						
Hillpoint	6/8-6/14	9	0	1	1	
Richland Center - E	6/2-6/8	10	1	5	1	
Richland Center -W	6/2-6/8	4	0	5	1	
Richland Co.						
Baraboo	6/2-6/8	10	1	6	3	
Dane Co.						
Deerfield	6/8-6/15	78	0	15	2	
West Madison	6/9-6/16	0	2	0	1	
Dodge Co.						
Brownsville	6/10-6/16	3	0	1.5	0	
Racine Co.						
Raymond	6/9-6/16	28	0	5	17	
Rochester	6/9-6/16	220	0	2.9	2	0
Kenosha Co.						
Burlington	6/10-6/17	100	0	3.5	4	
Ozaukee Co.						
Mequon	6/9-6/13	0	0	0.8	2	0
Waukesha Co.						
New Berlin	6/9-6/16	100	1	14	11	
Pierce Co.						
Beldenville	6/9-6/16	14	4	5	0	
Spring Valley	6/10-6/17	2	0	1	1	1
Marquette Co.						
Montello	6/5-6/12	32	0	8	0	0
Sheboygan Co.						
Plymouth	6/10-6/17	25	0	20	2	
Fond du Lac Co.						
Malone	6/9-6/16	35	0	1	0	
Marinette Co.						
Wausaukee	6/10-6/17	0	0	11	0	0

UW Plant Disease Diagnostics Clinic

For more information on the UW Plant Disease Diagnostics Clinic, visit the Plant Disease Diagnostic Clinic website.
Diagnoses since 6/8/05.

CROP	DISEASE/DISORDER	PATHOGEN	COUNTY
FIELD			
Soybean	Brown Spot	*Septoria glycines*	Jefferson
	Seedling Blight	*Pythium* sp., *Phytophthora* sp., *Rhizoctonia* sp.	Waushara
FORAGE			
Alfalfa	Crown Rot	*Fusarium* sp., *Rhizoctonia solani*	Dane
VEGETABLE			
Potato	Common Scab	*Streptomyces scabies*	Oconto
	Kinder Tuber/ Secondary Tuber	Physiological disorder	Waushara
FRUIT			
Peach	Peach Leaf Curl	*Taphrina deformans*	Manitowoc
Raspberry	Orange Rust	*Arthuriomyces peckianus*	Dane
	Root Rot	*Pythium* sp.	Portage
EVERGREEN			
Pine (Including Austrian, White)	Phomopsis Tip Blight	*Phomopsis* sp.	Walworth
	Ploioderma Needle Cast	*Ploioderma* sp.	Waukesha
Spruce (Including Black Hills, Colorado Blue, Colorado Green)	Rhizosphaera Needle Cast	*Rhizosphaera kalkhoffii*	Dane, Sauk
	Spruce Needle Drop	*Setomelanomma holmii*	Dane, Sauk, Washington
	J-Root	Physiological	Dane
HERBACEOUS ORNAMENTAL			
Helleborine	Stem/Crown Rot	*Coniothyrium* sp.	Dane
Jack-in-the-Pulpit	Rust	*Uromyces ari-triphylli*	Dane
Pachysandra	Volutella Blight	*Volutella* sp.	Waukesha
Peony	Botrytis Blight	*Botrytis cinerea*	Rock
Phlox	Stemphylium Leaf Spot	*Stemphylium* sp.	Dane
ORNAMENTAL			
Crabapple	Diplodia Canker/Phomopsis Canker	*Diplodia* sp., *Phomopsis* sp.	Jefferson
Elm	Dutch Elm Disease	*Ophiostoma ulmi*	Dane
Serviceberry	Chemical Burn	Chemical Injury	Pierce
Viburnum	Chemical Burn	Chemical Injury	Pierce

Department of Agriculture,
Trade & Consumer Protection
Division of Agricultural Resources Management
PO Box 8911
Madison WI 53708-8911

Web Site of the Week

Wisconsin Farm Report

http://www.wisconsinfarmreport.com

Local celebrity Pam Jahnke, aka Farm Babe, of the Wisconsin Farm Report is a familiar voice on radio across the state. She also has a great web site where you can find weather, farming and market news.

Quote of the Week

The caterpillars of the commonwealth, Which I have sworn to weed and pluck away."

Wm Shakespeare (1564-1616),
Richard II, Act 2 Sc. 3

June 17, 2005