

WISCONSIN PEST BULLETIN

Timely crop pest news, forecasts, and growing season conditions for Wisconsin



STATE OF WISCONSIN DEPARTMENT OF AGRICULTURE, TRADE AND CONSUMER PROTECTION PLANT INDUSTRY BUREAU
2811 Agriculture Dr. Madison, WI 53718 • <http://pestbulletin.wisconsin.gov>

WEATHER & PESTS

Mostly dry, windy and warm weather prevailed for much of the week. Daytime highs in excess of 80°F accelerated corn and soybean emergence, while sunny skies and southerly winds promoted a rapid pace of alfalfa harvesting. Low temperatures briefly fell below freezing in the northeast following a frontal passage on Monday, but ranged from the low to mid-40s in the west and south. Rainfall continued to trend below normal. Most of the week's significant precipitation was confined to the far northwest region, with large areas of the state recording no measurable rain until Thursday. Meanwhile, planting progress remained well ahead of the standard pace. Soybean planting passed the halfway mark early in the week, while corn planting neared completion. Alfalfa producers harvested an additional 25% of the first crop, for a total of 34% as of May 21. Reports from growers depict generally favorable planting conditions, although heavier, more widespread rain would be welcome.

LOOKING AHEAD

EUROPEAN CORN BORER: The peak in moth activity may have occurred in portions of the southwest, south-central and west-central areas. Based on the European corn borer growing degree day model, the spring flight of moths is expected to peak at 631 degree days (base

50°F). Oviposition on vegetable and weed hosts has intensified and larval hatch is in progress in the south. Since development of this pest is not well synchronized with corn growth this spring, most first generation larvae are likely to develop on hosts other than corn.

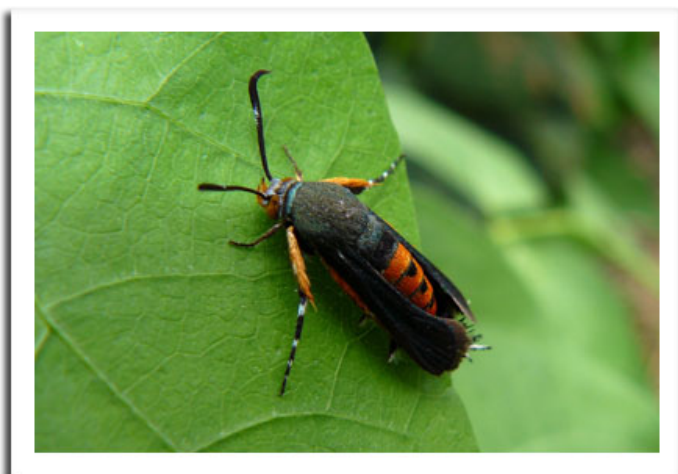
APPLE MAGGOT: Adult emergence from the soil could begin as early as June 1 near Beloit, June 4 near Madison, June 12 near Racine and June 15 near Eau Claire, which would be 4-5 weeks ahead of last season and unusually early. This annual event occurs at approximately 900 degree days (base 50°F) when soil moisture levels are adequate. Apple growers are advised to set yellow sticky board traps in perimeter trees adjacent to wild hosts or abandoned orchards in the next 1-2 weeks to detect the first male flies.

BLACK CUTWORM: Larvae from earlier flights of moths that oviposited in fields last month are now in the cutting stages. Damage has been observed Dane, Rock, Sauk and Walworth counties in the past two weeks, suggesting that corn growers should remain watchful for signs of feeding injury. Scouting may be discontinued after V5.

VARIEGATED CUTWORM: Additional reports have been received by the UW Insect Diagnostic Lab concerning eggs of this species on the windows and siding of homes in Ashland, Barron, Door, Douglas, Iron, Marathon, Oneida, Portage and Washburn counties. Much of

the population at this time consists of small larvae and eggs, which will inevitably hatch in a matter of days. Alfalfa, vegetable crops and home gardens in northern Wisconsin may begin to show evidence of infestation in the next 1-2 weeks. Favored plants include tomatoes, potatoes and hostas.

SQUASH VINE BORER: Moth emergence and egg laying are anticipated during the first week of June in the southern areas, about the time chicory blooms. Pumpkins, squash, gourds and other vine crops should be examined daily for eggs and evidence of larval boring from 900-1,000 degree days (base 50°F). Insecticidal controls must be applied to the stems of plants when the adults are first noticed, while the runners are less than two feet long. Repeated applications may be required throughout the three-week oviposition period.



Squash vine borer moth

D. Charvat '10 flickr.com

FORAGES

ALFALFA WEEVIL: Larval populations have begun to decline due to pupation and harvest of first crop alfalfa. Some carry-over into second crop regrowth has been observed, but counts are below 3 per sweep and leaf damage is generally less than 20%. Most larvae are in the late instar stages and should pupate by early June. Continued scouting is recommended until the second crop is established or the weevil season has passed.

POTATO LEAFHOPPER: Surveys in the southern and east-central areas indicate that levels of this insect remain below established economic thresholds in both the first and second crops. The recent hot weather may change the situation by early to mid-June.

DEGREE DAYS JANUARY 1 - MAY 23

LOCATION	50°F	2011	NORM	48°F	40°F
Dubuque, IA	715	377	458	731	1291
Lone Rock	710	353	—	704	1246
Beloit	725	390	466	716	1289
Madison	676	319	438	687	1210
Sullivan	664	333	413	658	1192
Juneau	623	292	—	616	1138
Waukesha	546	252	—	541	1047
Hartford	535	241	—	530	1031
Racine	490	206	—	502	988
Milwaukee	481	199	346	490	972
Appleton	532	222	372	521	1022
Green Bay	459	180	346	470	940
Big Flats	612	262	—	593	1100
Hancock	600	254	427	580	1087
Port Edwards	573	240	415	555	1055
La Crosse	670	320	487	662	1209
Eau Claire	577	266	425	563	1083
Cumberland	488	238	366	480	971
Bayfield	356	152	—	342	739
Wausau	493	208	361	478	947
Medford	492	214	319	487	959
Crivitz	423	173	—	417	877
Crandon	421	185	291	399	849

Method: ModifiedB50: Sine48: ModifiedB40 as of Jan 1, 2012. NORMALS based on 30-year average daily temps, 1981-2010.

PEA APHID: This aphid is the most abundant insect in Wisconsin alfalfa fields. Counts in the southern half of the state range from 2-29 per sweep, with an average of 12 per sweep. The highest population this week was encountered near Reedsburg in Sauk County.

MEADOW SPITTLEBUG: Counts rarely exceed 1 per 10 stems. Development has progressed rapidly in past weeks and late instar nymphs are common in many southern and central alfalfa fields. A population of 1 or more nymphs per stem may interfere with harvest operations, but these insects are inconsequential at current levels. Adults should begin collecting in sweep nets by early June.

CORN

EUROPEAN CORN BORER: The spring flight of moths continued for the third week, with counts of 1-85 moths per trap registered from Janesville to Chippewa Falls.

The European corn borer degree day model suggests that the peak in moth activity has already occurred in the south-central, southwest and west-central areas and should occur before June 2 in the central counties and by June 10 in the northern counties. Most corn is unsuitable for larval development at this time, so egg deposition is likely occurring on peas, peppers, potatoes, snap beans and various weed hosts.

WESTERN BEAN CUTWORM: Pheromone trap installation is planned for the first two weeks of June this year. If warm weather continues, the first moths could emerge by early June. Persons interested in participating in the trapping program should email Clarissa Hammond at clarissa.hammond@wi.gov or call 1-866-440-7523.

CORN ROOTWORM: Research conducted by entomologists at the Illinois Natural History Survey shows that 50% of overwintered eggs will have hatched between 684 and 767 degree days (base 52°F), or from May 25-June 1 near Janesville and Madison. All corn fields, both Bt and non-Bt hybrids, should be inspected for larval feeding injury in June. Continuous non-Bt corn and Bt corn with persistent populations are at greatest risk for root damage. Corn rootworm degree day accumulations through May 23 were as follows: Madison 644, La Crosse 707 and Wausau 466.



Western corn rootworm beetles

[k_d arvin flickr.com](#)

BLACK CUTWORM: Light injury was noted in 2 of 21 corn fields sampled in the past week. This observation, coupled with reports of economic damage of 3-13% in a few fields last week, should serve as an indication for crop advisors and growers to continue inspecting emerging corn for signs of larval feeding. A rescue treatment is justified when 3% of plants are damaged.

SOYBEANS

SOYBEAN APHID: The first soybean aphids of the 2012 growing season could begin to colonize Wisconsin soybean fields in the next two weeks. In previous years, the earliest aphid reports were as follows: June 7 in 2011, June 2 in 2010, June 9 in 2009, June 18 in 2008, May 24 in 2007, June 7 in 2006, and June 3 in 2005.



Soybean aphids

[Tracey Baute fieldcropnews.com](#)

SMALL GRAINS

WHEAT RUST: Survey observations in 16 wheat fields from Rock to Outagamie counties were made between May 15 and 22. Stripe rust was found in three fields: one in Dodge, one in Winnebago and one in Outagamie County. Crop stages ranged from late boot to flowering complete to top of head, or Feekes 10.1-10.52. Stripe rust infection was generally restricted to the flag leaf, and the incidence was very low in all three fields. Current forecasts for hot and dry weather should restrict any further development of stripe rust in the state. Samples for race identification have been sent to USDA.

Other diseases observed were powdery mildew in 13 of 16 fields, with severity ranging from trace levels to 2% of lower leaf surface colonized, tan spot in 10 fields, and barley yellow dwarf virus (BYDV) in three fields. Aphids were present in all fields with BYDV symptoms

FRUITS

OBLIQUEBANDED LEAFROLLER: Development of this insect varies greatly by orchard location. The spring flight

of moths has been underway in the south for 3-4 weeks, while larvae of various maturities are still present at some sites. Orchards that successfully controlled the second generation last August are reporting lower numbers of moths this spring. The recommended scouting procedure for OBLR is to begin checking terminals for small larvae 7-10 days after the first moths are captured. Although there is no direct correlation between trap counts and larval populations, scouting is imperative since orchards that register even low counts (< 5 moths per trap) can develop significant larval problems 10-14 days after a flight has occurred.



Obliquebanded leafroller larva

Utah State University

SPOTTED TENTIFORM LEAFMINER: Moth counts are expected to increase abruptly by early June as the second flight begins. Numbers were extremely low this week and ranged from 1-68, with an average of only 10 moths per trap. This is the lowest average count since the first flight began in mid-April. The economic threshold for STLM increases from 0.1 to 1.0 mine per leaf for the second generation of sapfeeder larvae in June.

PLUM CURCULIO: The migration period has effectively ended across southern Wisconsin. Apple growers who applied a material for plum curculio control—whether a perimeter spray, an alternate-middle spray, or a complete cover spray—should not expect to see additional migration from the orchard perimeter. Oviposition inside the orchard, however, will extend into June. The migration is still in progress in northern Wisconsin, and growers there should continue to monitor perimeter trees for oviposition scars and feeding injury.

SAN JOSE SCALE: First generation crawlers have been active in southern Wisconsin orchards for the last several

weeks, and many have settled onto the fruits and leaves by now. Continued sampling by taping scaffold branches is advised to determine when hatch is complete and if control treatments were effective. Neonicotinoids, insect growth regulators or other materials directed against mobile crawlers are ineffective once the scales have begun to secrete their waxy covering.



San Jose scale on plum

Elizabeth Wahle ipm.illinois.edu

CODLING MOTH: Reports indicate that there is considerable variation in codling moth pressure between orchards. Counts ranged widely in the past week, with 18 of the 29 monitoring locations registering economic numbers of 5 or more moths per trap. The weekly high count of 44 male codling moths was documented near Mount Horeb in Dane County. Egg deposition has accelerated and a strong potential exists for damaging populations if treatments are not applied on time.

Apple orchards that established biofix on May 3-4 are now approaching the 250 degree day point at which a larvicide should be applied. However, in locations where the spring flight has been minimal, growers may benefit from delaying applications until 350 degree days post-biofix. Orchard IPM Specialist John Aue considers a cumulative count of 20 or fewer moths in the 250 degree day interval after biofix to be a small flight, and recommends that growers in this situation delay spraying until 350 degree days. On the contrary, orchards that registered high moth counts immediately after the flight began in early May should treat soon, at the traditional 250 degree day standard.

GRAPE FLEA BEETLE: This insect reportedly has caused severe damage to grapes in northern Wisconsin vineyards, where grape development is less advanced and

many varieties were in the swelled bud to bud burst stages as of May 11. The most significant injury was observed on vines near vineyard perimeters adjacent to grassy areas, alfalfa and woodlots. Wild grapes were also attacked by the adults, which consume the leaf tissue of newly expanded leaves. Farther south in Sauk County, the larval stages were very active, numerous and rapidly devouring grapevine foliage in the past week.

VEGETABLES

CABBAGE LOOPER: Mid-stage larvae from the early May migration have been observed in cabbage transplants in southern Wisconsin. Although numbers are currently insignificant, their presence indicates the potential for larger populations later this season. The subsequent generation of larvae appearing next month could cause considerable damage unless controlled.

SPOTTED CUCUMBER BEETLE: These insects, also known as “southern corn rootworm beetles”, have been noted in many alfalfa fields in the past several weeks. Spotted cucumber beetles are of primary concern to cucumber and melon growers due to their capacity to transmit bacterial wilt. A count of 4-5 beetles per 50 plants indicates the potential for disease transmission.



Spotted cucumber beetle

imarsman flickr.com

SQUASH VINE BORER: Squash, pumpkin and zucchini growers are advised to closely inspect susceptible plants over the next 3-4 weeks for the flat, brown eggs deposited at the base of stems. Larvae bore into the stems of crops upon hatch, necessitating early monitoring and control as soon as the eggs are noticed. Damage is more likely to occur in gardens and commercial plantings pre-

viously infested by this pest. Growers should promptly pull and destroy wilted plants.

VARIEGATED CUTWORM: Based upon the extraordinary numbers of eggs appearing on homes and in vegetation in the northern half of the state, damage to hostas, potatoes, tomatoes and many other fruits, ornamentals and vegetables is very probable next month. Nocturnal feeding by these “climbing” worms results in large, irregular holes at the leaf margins or oblong holes within the leaf bounded by veins. The larvae also devour buds and fruits, in addition to foliage.



Tomatoes damaged by variegated cutworm

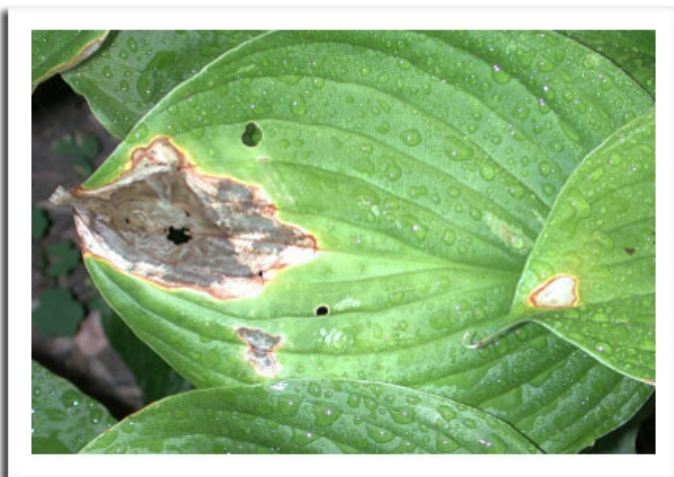
omafra.gov.on.ca

CORN EARWORM: Low numbers of moths have been registered in pheromone traps since mid-May, signaling a very light migration is occurring. The May 22 report from insectforecast.com states that the active weather pattern predicted for the next several days will be conducive for migration into extreme southwest Wisconsin, where a corridor of strong southerly winds may result in higher moth numbers moving north from southern source regions.

YELLOWSTRIPED ARMYWORM: Moths are appearing in southern Wisconsin black light traps. The Arlington, Coon Valley and Mazomanie locations reported low counts of 3-10 moths in the past two weeks. This foliage-feeding caterpillar is sporadically injurious to beans, broccoli, cauliflower, cucumbers, lettuces, peppers, tomatoes and young stands of field crops. Most of its injury consists of defoliating small plants. Since these armyworms are difficult to control with insecticides, early detection is important for maintaining populations below economic injury levels.

NURSERY & FOREST

ANTHRACNOSE: This fungal leaf spot disease of many herbaceous and woody plants is reported to be infecting hostas in Kenosha, Milwaukee and Racine counties. Anthracnose is the most widespread foliar disease of hosta. Symptoms vary by host plant, but typically appear as irregular necrotic spots with dark borders that merge to form large dead areas. No corrective action is needed, aside from disposing of infected leaf litter and debris to reduce inoculum sources.



Anthrachnose on hosta

Dustin rvmg.blogspot.com

INVASIVE SPECIES RULE: Nursery inspectors report that the invasive ornamentals *Ampelopsis brevipedunculata* 'Elegans' (variegated porcelain berry), *Leymus arenarius* (blue lyme grass), *Nymphoides peltata* (yellow floating heart) and *Hesperis matronalis* (dame's rocket) were being offered for sale at nurseries and garden centers in Bayfield, Ozaukee and Sauk counties. Under the Chapter NR 40 Wisconsin Invasive Species Rule, it is illegal to transport, import, transfer, sell or introduce any species included in the rule's prohibited or restricted categories. It is important for nursery operators and brokers to become familiar with these species because some may be available from out-of-state sources. Refer to the following website for a list of Chapter NR 40 invasive species: <http://dnr.wi.gov/topic/invasives/classification.html>

GYPSY MOTH: Gypsy moth Btk treatments totaling 9,158 acres were applied from May 17-22 in Barron, Bayfield, Burnett, Chippewa, Douglas, Dunn, Polk, Rusk and Sawyer counties. The Wisconsin DNR's Gypsy Moth Suppression Program also treated 196 acres on the property of Governor Thompson Centennial State Park in

Marinette County on May 17. A second application of Btk is tentatively scheduled for May 29 in Bayfield, Douglas and Sawyer counties on approximately 2,347 acres. Spraying has ended for the year in Barron, Burnett, Chippewa, Clark, Grant, Green, Iowa, Lafayette, Marinette and Polk counties.

COLUMBINE LEAFMINER: Leaf mines caused by the larval stages of this insect were noted this week on columbine in a Marquette County nursery. The serpentine mines initially appear whitish in color and eventually turn tan or brown later in the season. Removing and destroying infested leaves will reduce this aesthetic problem.

WEEDS

VOLUNTEER CORN: Growers of glyphosate-tolerant soybeans that use only glyphosate for weed control can expect volunteer corn to begin emerging in soybean fields in the next 2-3 weeks. This weed has become one of the top five unwelcome plants in Midwestern soybean fields, behind lambsquarters, waterhemp, ragweed and horseweed. Surveys of nearly 1,000 Wisconsin soybean fields last summer found volunteer corn plants at 57% of sites statewide, which is a 15% increase from infestation rates documented during the 2009 survey. Approximately 26% of the surveyed soybean fields were rated as "severely infested". A calculation formulated by Purdue Weed Scientists shows that infestations of just 16 corn plants per square meter can reduce soybean yields by as much as 40%. Accordingly, weed management programs should account for volunteer corn control since this plant can substantially reduce yield and quality, and its widespread occurrence is thought to contribute to development of Bt resistance among corn rootworm populations.

CUT-LEAVED TEASEL: Last year's tall, brown teasel stalks are still apparent along roadsides in many parts of the state. These remnants are an excellent indicator of where overwintered rosettes will bolt and reproduce by seed this season. The rosettes can be controlled by pulling the entire above- and below-ground portions of the plant, or by severing the taproot 1-2 inches below the soil surface. Both the cut-leaved and common teasel species have become increasingly prevalent in Wisconsin in the last 3-5 years.

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 17 - 23

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OBLR ⁵	AM RED ⁶	YELLOW ⁷	GDD 50°F
Bayfield	Keystone	0	40	0	1				
Bayfield	Oriente	49	11	—	—				
Brown	Oneida	14	13	17	0				
Chippewa	Chippewa Falls	0	23	16	1				
Crawford	Gays Mills	—	—	—	—				
Dane	Deerfield	5	0	8	0				
Dane	McFarland	0	1	3	0				
Dane	Mt. Horeb	0	0	44	16				
Dane	Stoughton	14	0	6	27				
Dodge	Brownsville	0	0	3	1				
Fond du Lac	Campbellsport	0	3	0	0				
Fond du Lac	Malone	6	1	10	0				
Fond du Lac	Rosendale	12	46	2	2				
Grant	Sinsinawa	0	0	3	12				
Green	Brodhead	0	0	6	33				
Iowa	Mineral Point	1	0	23	11				
Jackson	Hixton	34	3	9	2				
Kenosha	Burlington	10	0	1	23				
Marathon	Edgar	12	83	6	6				
Marinette	Niagara	68	0	26	0				
Marquette	Montello	7	17	16	0				
Ozaukee	Mequon	0	1	19	0				
Pierce	Beldenville	1	7	7	0				
Pierce	Spring Valley	0	25	27	2				
Polk	Turtle Lake	40	25	31	40				
Racine	Rochester	0	1	31	10				
Richland	Hillpoint	0	1	4	9				
Sheboygan	Plymouth	24	17	17	0				
Walworth	East Troy	3	4	0	—				
Walworth	Elkhorn	1	5	0	—				

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller EASTERN; ⁵Obliquebanded leafroller WESTERN; ⁶Apple maggot red ball; ^{*}Unbaited AM trap; ^{**}Baited AM trap; ⁷Apple maggot yellow board.

COUNTY	SITE	ECB ¹	TA ²	BCW ³	SCW ⁴	DCW ⁵	CE ⁶	CEL ⁷	WBC ⁸	FORL ⁹	VCW ¹⁰
Chippewa	Chippewa Falls	6	2	0	0	0	0	22	0	0	0
Columbia	Arlington	3	3	0	0	0	0	1	0	4	0
Crawford	Prairie du Chien	0	0	0	0	0	0	0	0	0	2
Fond du Lac	Ripon	0	12	0	0	0	0	0	0	0	2
Manitowoc	Manitowoc	0	53	12	0	0	0	2	0	27	0
Marathon	Wausau	0	150	6	11	0	0	30	0	9	2
Monroe	Sparta	85	23	0	29	0	0	0	0	7	11
Portage	Plover	12	0	0	0	0	2	0	0	0	0
Rock	Janesville	0	22	0	1	0	0	7	0	6	1
Walworth	East Troy	11	2	0	0	0	0	2	0	0	0
Wood	Marshfield	1	54	3	1	0	0	13	0	10	7
Vernon	Coon Valley	29	35	4	3	0	0	8	0	12	2

¹European corn borer; ²True armyworm; ³Black cutworm; ⁴Spotted cutworm; ⁵Dingy cutworm; ⁶Corn earworm; ⁷Celery looper; ⁸Western bean cutworm; ⁹Forage looper; ¹⁰Variegated cutworm.