

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

Cool weather with scattered showers persisted throughout the week, slowing crop emergence and prolonging fieldwork delays. Daytime high temperatures were below-normal and ranged from the 40s near the Great Lakes to the lower 70s in western Wisconsin, while lows declined to the upper 20s to 30s in the northeast and 30s to low 50s elsewhere. Another widespread freeze over portions of northern and central Wisconsin on May 7-9 damaged fruit trees and other cold-sensitive plants, and frost across the southern counties threatened emerging crops. Meanwhile, spring tillage and planting advanced on the drier days where field conditions allowed, but progress was limited by the added precipitation and excessively wet ground. Corn planting was only 15% complete at the start of the week, 10 days behind last year, and six days behind the five-year average. After an abnormally long cold spell beginning in late April, seasonal temperatures, including the first 80 degree readings of the year, are forecasted to return next week.

LOOKING AHEAD

BLACK CUTWORM: Migrants arrived in lower numbers this week, with only 210 moths collected compared to 498 the week before. The cumulative total count as of May 10 is 1,744 moths in 45 traps. Larvae resulting from

the annual migration are expected to reach the corn-cutting fourth-instar stage by May 21 in far southern Wisconsin. The large number of moths captured this spring indicates an increased risk of black cutworm damage to vegetative corn later this month and in early June.

EUROPEAN CORN BORER: Degree day accumulations in advanced portions of southern and west-central Wisconsin should exceed the 374 units (modified base 50°F) required for moth emergence late next week. Black light traps could capture the first moths of the season by May 20 or 21, although the majority of spring adults are unlikely to emerge until the end of the month.

PLUM CURCULIO: Cool weather this week delayed weevil migration into orchard perimeter trees, but the first adults and oviposition scars can be anticipated soon after petal fall. Apple growers are advised to examine early cultivars once fruits reach 5 mm for the crescent-shaped scars indicative of plum curculio egg laying. Control treatments are generally directed against the adults to prevent oviposition.

ALFALFA WEEVIL: Larvae are appearing in southern and west-central Wisconsin alfalfa. Counts this week were low and defoliation was not observed. Sampling for larvae and leaf feeding damage should start by May 15 and continue through first harvest and early second-crop

regrowth. A defoliation level affecting 40% or more of alfalfa stems in the first crop signals the larval population is high and early harvest would be beneficial.

CODLING MOTH: Emergence is expected to begin late next week in apple orchards where nightly temperatures exceed 62°F and conditions are suitable for moth flight. Close monitoring of traps over the next two weeks is suggested to determine the “biofix” or first sustained moth capture on consecutive nights.



Codling moth

Giancarlo M. www.naturamediterraneo.com

FORAGES & GRAINS

ALFALFA WEEVIL: Larvae were collected from alfalfa in La Crosse, Sauk and Vernon counties on May 9. Surveys yielded low counts of 1-4 larvae per 100 sweeps in less than 10% of sampled fields, although an exceptional field south of Reedsburg in Sauk County had 44 per 100 sweeps. Adult weevils are becoming more common and spring egg deposition in alfalfa stems is expected to increase noticeably with next week’s forecasted warming trend. Sampling for larvae and leaf tip feeding should commence in the week ahead.

PEA APHID: Surveys in Adams, Dane, Green, Iowa, Juneau, La Crosse, Marquette, Monroe, Rock, Sauk and Vernon counties found a range of 3-89 aphids per 100 sweeps and an average of 28 per 100 sweeps, a two-fold increase over the 15 per 100 sweeps average noted two weeks ago. Pea aphid development is favored during periods of cool, dry weather, with populations increasing most rapidly at temperatures around 65°F. Severe infestations early in the season can cause stunting of the first crop and impact subsequent cuttings.

DEGREE DAYS JANUARY 1 - MAY 10

LOCATION	50°F	2016	NORM	40°F
Dubuque, IA	356	311	310	772
Lone Rock	326	289	—	680
Beloit	337	317	318	726
Sullivan	290	207	274	636
Madison	300	261	297	648
Juneau	276	212	—	605
Racine	243	189	—	578
Waukesha	267	207	—	604
Milwaukee	242	180	232	574
Hartford	266	207	—	595
Appleton	208	176	—	494
Green Bay	207	140	222	483
Big Flats	268	251	—	571
Hancock	231	251	283	505
Port Edwards	226	242	278	502
La Crosse	301	314	330	657
Eau Claire	249	278	281	560
Cumberland	157	243	232	416
Bayfield	93	145	—	302
Wausau	171	188	233	429
Medford	152	193	201	412
Crivitz	186	131	—	451
Crandon	131	163	184	371

*Method: Modified B50; Modified B40 as of January 1, 2017.
NORMALS based on 30-year average daily temps, 1981-2010.*

This insect is also suspected of transmitting certain alfalfa virus diseases.

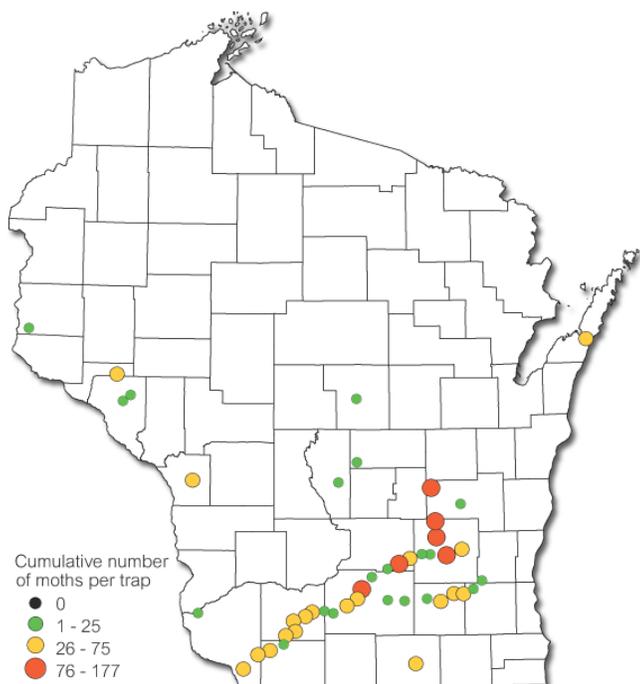
TARNISHED PLANT BUG: Counts of this insect are still very low at less than nine per 100 sweeps. Plant bug levels in alfalfa in May and June are rarely of economic importance, but their relative abundance is an indicator of potential problems for other fruit, flower and vegetable hosts. The numbers observed this week suggest populations are low but increasing, and scouting of apples and strawberries is in order.

CORN

BLACK CUTWORM: Larvae resulting from the spring migration are expected to reach the destructive late-instar corn cutting stages by May 21. Based on the substantial April-May moth flights and widespread planting delays, much of the state’s corn acreage is considered to be at higher risk of infestation this season.

Outbreaks of this corn and vegetable pest are sporadic but generally develop in years such as this one, when spring weather patterns favor large migrations into the state, and cool, damp conditions delay planting and weed control. Cornfields with preexisting winter annual weed infestations and those affected by spring flooding should be closely monitored following emergence for early signs of cutworm activity.

Black Cutworm Counts Spring 2017



Wisconsin Department of Agriculture, Trade and Consumer Protection



Summarized in the map above are cumulative black cutworm counts for the period of March 26-May 10. The spring trapping survey has so far captured 1,744 moths



Black cutworm larva

www.export.biocontrol.ch

in 45 traps, with a high individual count of 177 moths near Juneau in Dodge County. The last time the annual trapping survey documented a spring moth migration this large was in 2012, when 1,684 moths had been captured in 31 traps by mid-May. Approximately 1,400 moths in 43 traps had been collected by this time last year.

EUROPEAN CORN BORER: A few early spring adults could emerge late next week in locations such as Beloit, La Crosse and Spring Green where the 374 degree days (modified base 50°F) required for corn borer flight to begin are likely to be surpassed over the weekend of May 20-21. Black light trappers are advised to carefully examine trap contents during the next two weeks for the first spring moths.



European corn borer moth

Heidrun Melzer www.lepiforum.de/wiki

TRUE ARMYWORM: Counts in black light and pheromone traps have been low as of May 3, though higher numbers of armyworms may have arrived along with the black cutworms over the last several weeks. The first moths of the 2017 season were registered at Janesville on the night of April 4, and 77 more specimens have been collected since then. Environmental conditions that favor black cutworm outbreaks (i.e., cold, damp spring weather) are also generally conducive for armyworm activity and development.

FRUITS

SPOTTED TENTIFORM LEAFMINER: Moths of the spring flight have been active for five weeks, and peak emergence has occurred in some orchards. Populations are now transitioning into the larval stages. The recommended sampling period for first generation sapfeeder larvae is 10-14 days after a peak capture is recorded.

Pheromone trap counts for the period of May 4-10 ranged widely from 0-1,440 moths, with the high count registered at Mineral Point in Iowa County.

THRIPS: A Fond du Lac County apple grower reports that thrips are active in orchard edge trees adjacent to wooded areas. Apple growers are advised to check buds on several different varieties in multiple locations, including the perimeter, for thrips activity. A count of three or more thrips per fruit bud can cause abnormal leaf formation, leaf tatter, flower injury and reduced fruit set, and is considered an economic population. Materials available for thrips control are spinosad (Entrust) for organic growers and spinetoram for conventional growers (Delegate for apples or Radiant for strawberries).

PLUM CURCULIO: Overwintered weevils are likely to begin migrating into orchards next week as temperatures moderate. Early blooming varieties such as 'Gala', 'McIntosh' or 'Paulared' should be checked for evidence of feeding and oviposition during the first 14 days after petal fall.



Plum curculio crescent-shaped oviposition scar leereich.blogspot.com

CODLING MOTH: The first sustained capture of moths on consecutive nights, referred to as the "biofix", is anticipated next week. Daily monitoring of traps is advised until the biofix date is established.

REDBANDED LEAFROLLER: Counts are expected to decline soon in most orchards as the first flight concludes. The average count this week was 59 moths per trap, with a high of 159 moths reported from Spring Valley in Pierce County. Egg hatch is occurring and larvae are emerging across the southern and central counties.

OBLIQUEBANDED LEAFROLLER: These yellowish-green larvae with black head capsules are currently feeding on apple blossoms and shoots, and evidence of their activity is detectable with a 10X hand lens. Pheromone traps should be placed soon to detect the first OBLR moths of the 2017 season, expected to appear around fruit set.



Obliquebanded leafroller larva

whatcom.wsu.edu

VEGETABLES

ONION MAGGOT: Emergence of flies from overwintered pupae is likely to begin in the Beloit, La Crosse, Lone Rock and Madison areas of south-central and southwestern Wisconsin next week. Degree day accumulations as of May 10 reached 645 at Beloit, 631 at La Crosse and 568 at Lone Rock; approximately 680 degree days (simple base 40°F) are required for adult emergence. Flies of this spring generation are usually the most damaging, especially at sites where onions are grown in succession and cull onions are left in fields.

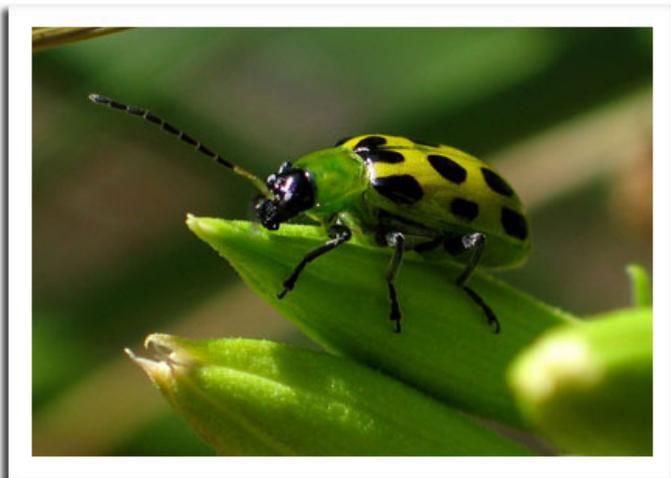


Onion maggot fly

Sylvain Tremblay www.sylvaintremblayphoto.com

Preventative soil insecticides at seeding should be considered if maggot damage to the last season's crop exceeded 5-10%. Granular furrow treatments offer good control of first and second-generation maggots, provided the rate is correct and the insecticide is placed in the furrow properly with the seed. Home gardeners are advised to rotate this year's onion plantings as far as possible from last year's to reduce the probability of damage.

SPOTTED CUCUMBER BEETLE: Spring migrants were collected from Iowa County alfalfa earlier this week. These distinctive yellowish-green beetles with black spots do not overwinter in Wisconsin, but arrive at this time of year on storm fronts originating in the southern United States. Both the spotted species and the striped cucumber beetle transmit bacterial wilt of cucumbers, muskmelons and watermelons. Scouting field edges and interiors multiple times per week is recommended starting in late May once the beetles are noticed. Early control of the striped beetle species may be required in large commercial muskmelon or cucumber operations if numbers are high, especially if the beetles have been a problems in the past. Spotted cucumber beetles are rarely abundant enough to require treatment.



Spotted cucumber beetle

imarsman flickr.com

SEEDCORN MAGGOT: Fresh market vegetable growers are reminded that spring applications of compost should be incorporated at least two weeks prior to planting to avoid seed maggot infestations in spring-seeded crops. Any green manure or cover crops should also be plowed down two weeks prior to planting.

LATE BLIGHT: According to the requirements of Wisconsin Administrative Code (ATCP 21.15(2)), potato cull piles

must be fed, disked in or otherwise removed by May 20, to prevent late blight from developing on volunteer plants. No late blight cases have been confirmed in Wisconsin at this early point in the season, but the risk of the disease occurring again in 2017 is elevated given the presence of the late blight pathogen in the state in 2016.

COLORADO POTATO BEETLE: Overwintered adults will soon begin emerging from hibernation and dispersing to plants near field edges. The early colonizing population is seldom damaging to young potatoes protected with a systemic neonicotinoid, but monitoring beetle abundance is advised to ensure effectiveness of insecticide products. Egg deposition and larval hatch can be expected by the third week of May. The orange-yellow eggs are deposited in clusters of 15-30 on the undersides of leaves.



Colorado potato beetle

Jiri Bohdal www.naturephoto-cz.com

NURSERY & FOREST

HOSTA VIRUS X: This common virus was found in several hosta varieties from Washington County during inspections last week. Since first reported in 1996, many nursery owners and home gardeners have voluntarily destroyed numerous hostas to help limit the spread of HVX, but the disease remains prevalent in the nursery trade, being transmitted mechanically during garden operations and by propagation of infected stock. Green and yellow leaf mottling, ringspots, discoloration along leaf veins, and puckering are typical symptoms. All cultivars of hosta are susceptible, with the type and severity of symptoms depending upon the cultivar. Disease management must come through preventing transmission. Continued diligence in maintaining virus-free propagating stock, purchasing virus-free hostas,

proper pruning sanitation, and destroying infected plants are the best controls.



Hosta virus X on 'Blue Cadet' hosta Shanon Hankin DATCP

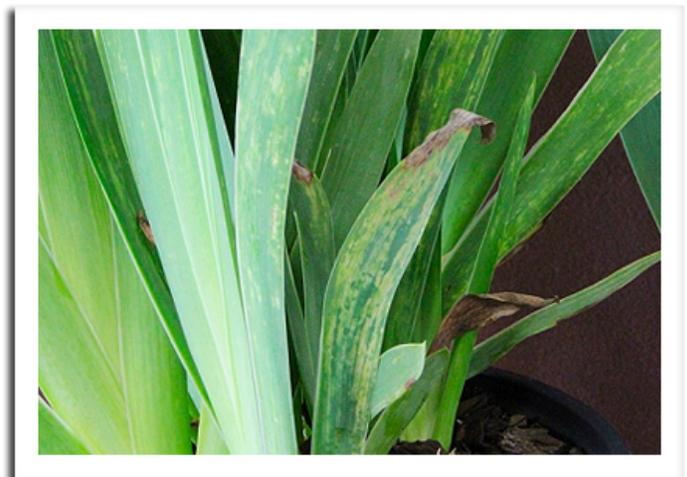
CROWN RUST: Nursery inspectors report that the orange-yellow spots characteristic of this rust disease are appearing on the leaves of common and lance-leaved buckthorn from Kenosha to St. Croix County. Although not particularly damaging to buckthorns, the spots produce spores capable of infecting oats and significantly reducing grain yield. The extent and severity of infection varies from year to year, depending on weather, the amount of rust inoculum present, and the acreage of susceptible varieties. Heavy amounts of rust inoculum on the buckthorn host may indicate greater rust potential for oats this year, should damp conditions suitable for infection continue.



Crown rust on buckthorn Liz Meils DATCP

IRIS POTYVIRUS: Several Iris plants recently submitted to the Plant Industry Bureau Laboratory from Racine and

Washington counties were diagnosed with this virus. Symptoms are leaf mottling and striping and stunting; severe infection can cause decline or premature plant death. Named after Potato virus Y (the type virus), members of the genus Potyvirus account for approximately 30% of currently known plant viruses. More than 200 species of aphids are known to spread these viruses, with transmission also occurring through mechanical inoculation, but not by grafting or contact between plants. Infected plants should be removed and destroyed.



Potyvirus in Iris Anette Phibbs DATCP

APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 4 - 10

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	OFM ⁵	LPTB ⁶	DWB ⁷	AM RED ⁸	YELLOW ⁹
Bayfield	Keystone	—	—							
Bayfield	Oriente	2	0							
Brown	Oneida	575	19	0			0			
Columbia	Rio	—	—							
Crawford	Gays Mills	—	—							
Dane	DeForest	—	—							
Dane	Edgerton	—	—							
Dane	Mt. Horeb	160	149	0		1	0			
Dane	Stoughton	48	116							
Fond du Lac	Campbellsport	70	40	0		0				
Fond du Lac	Malone	10	35	0		0				
Fond du Lac	Rosendale	36	43			0	0			
Grant	Sinsinawa	2	71							
Green	Brodhead	11	87	0	6	0	0			
Iowa	Mineral Point	1440	50	0		0				
Jackson	Hixton	28	1	0	0	0	0			
Kenosha	Burlington	55	4	0		0				
Marathon	Edgar	992	68			0	0			
Marinette	Niagara	—	—							
Marquette	Montello	891	73	0		0				
Ozaukee	Mequon	0	15	1	0	0				
Pierce	Beldenville	212	87	0	0	0	0			
Pierce	Spring Valley	152	159		0					
Racine	Raymond	42	12	0	0	3	0			
Racine	Rochester	98	34		0					
Richland	Hill Point	111	106	0		0	0			
Sheboygan	Plymouth	820	138							
Walworth	East Troy	82	34			0				
Walworth	Elkhorn	28	91			0				
Waukesha	New Berlin	6	9	0	0	0	0			

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵Oriental fruit moth; ⁶Lesser peachtree borer; ⁷Dogwood borer; ⁸Apple maggot red ball; ^{*}Unbaited; ^{**}Baited; ⁹Apple maggot yellow board.

COUNTY	SITE	BCW ¹	CEL ²	CE ³	DCW ⁴	ECB ⁵	FORL ⁶	SCW ⁷	TA ⁸	VCW ⁹	WBC ¹⁰
Columbia	Arlington	0	0	0	0	0	1	0	1	0	0
Columbia	Pardeeville	1	0	0	0	0	0	0	2	0	0
Dodge	Beaver Dam	—	—	—	—	—	—	—	—	—	—
Fond du Lac	Ripon	0	0	0	0	0	0	0	0	0	0
Grant	Prairie du Chien	4	0	0	0	0	0	0	0	0	0
Manitowoc	Manitowoc	0	0	0	0	0	0	0	0	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	1	0	0	0	0	0	0	0	0	0
Rock	Janesville	1	1	0	0	0	1	0	3	0	0
Walworth	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	Marshfield	5	1	0	0	0	0	0	40	0	0

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