

# 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

Humid, hot weather prevailed in Wisconsin, favoring rapid planting and accelerating crop development. Temperatures over the Memorial Day weekend were the warmest of the year so far, with record-breaking highs on May 27 reaching 95°F at Madison and Milwaukee, and several other locations also setting records. Periods of rain boosted soil moisture supplies, which averaged 83% adequate or surplus statewide at the start of the week, while above-normal temperatures promoted rapid growth of field, fruit and vegetable crops. Planting of the 2018 corn crop advanced to 81% complete, six percentage points, or three days, ahead of last year and even with the five-year average. Forty-eight percent of the state's corn has emerged. Soybeans were 63% planted, 20 points or about five days ahead of last year and one day ahead of the average. Crop prospects have improved with the heat and precipitation, and the latest USDA NASS report rates 81-91% of the state's alfalfa, corn, oats, and wheat in good to excellent condition.

## LOOKING AHEAD

**EUROPEAN CORN BORER:** Moths began emerging by May 24 and are now depositing eggs on vegetable and weed hosts. Based on the European corn borer degree day model, the spring flight should peak from June 3-9

in southern and central Wisconsin and from June 10-16 in areas north of Wausau.

**BLACK CUTWORM:** Survey traps have captured a cumulative total of 1,984 moths at 47 monitoring sites since the first migrants were documented on April 12. Repeated significant flights throughout May signal that damaging infestations could continue to develop well into June. Many cornfields are under a heightened threat of larval infestation at this time. Routine scouting for evidence of cutting or below-ground tunneling injury is advised until V5.

**ALFALFA WEEVIL:** Defoliation will become more pronounced next week as more larvae reach the larger third and fourth-instars. Peak weevil feeding is predicted for June 1-14 across much of the state. Alfalfa fields harvested soon are unlikely to sustain economic larval damage exceeding the 40% threshold, and insecticide sprays can be avoided. Timely harvest remains the most effective management tool for this pest.

**CODLING MOTH:** Emergence of spring moths has surged, with very large flights of 20-71 moths recorded at several cooperating orchards. Controls directed against first-generation larvae are most effective when applied at approximately 250 or 350 degree days (modified base 50°F) after biofix, which is the equivalent of 11 or 16 calendar days at daily highs of 85°F and daily lows of 60°F. A first

larvicide application at 250 degree days post-biofix is recommended for sites with high CM pressure or heavy flights exceeding 10 moths per week.

**TRUE ARMYWORM:** Minor local flights have been documented in black light traps throughout May, and larvae are becoming increasingly common in alfalfa sweep net samples. Armyworm caterpillars should begin appearing on perimeter row corn plants in the next two weeks.

**SOYBEAN APHID:** Colonization of emerging soybeans is likely to occur in the week ahead. Reports indicate egg hatch on buckthorn has been underway for several weeks and the spring dispersal of winged aphids is expected to start now that more than 25% of the state's soybean acreage has emerged.

**JUNE BEETLE:** An extremely heavy population of adult June beetles has been reported from the Boscobel area of Grant County. According to the report, the beetles have severely defoliated young oaks and fruit trees, causing complete loss of the first flush of leaves. June beetle problems are usually localized, and control is rarely warranted.



June beetle

www.britannica.com

## FORAGES & GRAINS

**ALFALFA WEEVIL:** Larval populations remain low for late May. Surveys found no more than 21 larvae per 100 sweeps, with an average of only five per 100 sweeps. Defoliation is currently below 10% in most fields but will become more conspicuous next week as larvae transition into the larger and most destructive third and fourth-instars. First-

## DEGREE DAYS JANUARY 1 - MAY 30

LOCATION	50°F	2017	NORM	40°F
Dubuque, IA	659	617	564	1173
Lone Rock	576	544	—	1053
Beloit	567	567	573	1038
Sullivan	500	490	516	927
Madison	554	515	542	1013
Juneau	513	476	—	938
Racine	433	438	—	838
Waukesha	462	459	—	871
Milwaukee	459	433	436	873
Hartford	492	452	—	909
Appleton	492	393	—	877
Green Bay	469	384	440	849
Big Flats	529	463	—	948
Hancock	482	410	531	858
Port Edwards	487	402	517	869
La Crosse	604	522	603	1073
Eau Claire	550	447	530	953
Cumberland	458	294	464	791
Bayfield	350	162	—	648
Wausau	448	327	457	797
Medford	442	302	407	780
Crivitz	475	353	—	823
Crandon	431	262	369	753

*Method: Modified B50; Modified B40 as of January 1, 2018. NORMALS based on 30-year average daily temps, 1981-2010.*

crop alfalfa should be cut soon to avoid unnecessary insecticide treatment.

**PLANT BUG:** Populations escalated sharply in the past week with the addition of many small nymphs. Both the tarnished and alfalfa plant bug species are common in sweep net collections.

**PEA APHID:** Densities currently range from 1-4 per sweep in surveyed fields. Counts of this level are considered non-economic in alfalfa, though aphid populations can escalate rapidly when natural enemy populations are disrupted by alfalfa weevil insecticide sprays. Harvesting fields on time rather than using insecticidal control is important for preserving natural enemies.

**POTATO LEAFHOPPER:** The first distinct migration into Wisconsin has occurred and leafhoppers are appearing in low numbers in alfalfa. Adults were collected in 25% of fields surveyed from May 24-30, from Grant to Outagamie County. This insect customarily arrives in Wisconsin

around the time the first alfalfa crop is harvested and under favorable hot conditions can rapidly increase to damaging levels in the second crop.



Potato leafhopper

plantnexusgrow.com

## CORN

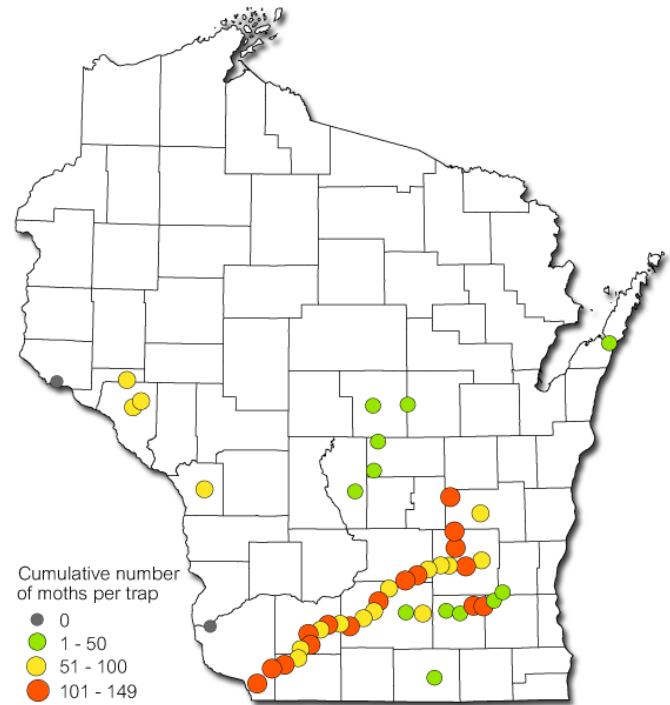
**EUROPEAN CORN BORER:** Emergence of spring moths began this week, with low numbers of 2-7 moths per trap captured in the Columbia, Fond du Lac, Monroe and Walworth County black light traps. The degree day model for this pest suggests egg deposition is occurring nearly statewide (in areas where 450 degree days [modified base 50°F] have been surpassed), except for the far northern counties. If warm temperatures continue, the first flight is forecast to peak by June 9 in the southern and central counties and June 16 in the north.


**BLACK CUTWORM:** Crop advisors and growers should continue to inspect emerging corn for signs of cutworm infestation, particularly fields with soybean residue or earlier broadleaf weed problems. One report of minor feeding damage was received from Rock County in the past week, though economic injury (>3% of plants damaged) has not been observed by DATCP surveyors as of May 31. As a reminder, cutworm larvae are capable of damaging corn protected with a Bt trait, usually in situations where larvae first develop on weeds or cover crops and are forced by late herbicide applications onto Bt corn when they are larger and less susceptible to Bt toxins. The threshold for corn is when 3% of plants show evidence of cutworm feeding.

Summarized in the map below are cumulative moth counts for the period of April 12-May 31. The spring trapping sur-

vey resulted in the capture of 1,984 black cutworms in 47 traps, with a high count of 149 moths near Mineral Point in Iowa County.

### Black Cutworm Counts April 12 - May 31



Wisconsin Department of Agriculture, Trade and Consumer Protection 

**TRUE ARMYWORM:** Minor flights have been documented in black light traps for several weeks, signaling a potential for larval infestations in small grains and corn. Reduced tillage corn following sod or a small grains cover crop, and fields with early-season grassy weed pressure are at higher risk for armyworm problems.



True armyworm moth

Krista Hamilton DATCP

## SOYBEANS

**SOYBEAN APHID:** Surveys conducted in La Crosse, Monroe, and Vernon counties were negative. The first soybean aphids of the growing season may begin appearing in fields by the first week of June.

**BEAN LEAF BEETLE:** A few soybean fields are showing 1-2% of plants with minor feeding caused by this defoliator. Damage is currently very light, but could become more severe as additional beetles migrate to emerging soybeans next month.



Bean leaf beetle

Krista Hamilton DATCP

## FRUITS

**CODLING MOTH:** A significant increase in codling moth activity was charted in the last week. Counts ranged as high as 71 per trap and averaged 18 per trap. Seven of the 28 reporting orchards registered very high counts of 20 or more moths per trap.

The spring biofix has now been set in most southern Wisconsin orchards and growers should make preparations to apply controls at 250-350 degree days (modified base 50°F) from their specific biofix date. The large moth numbers recorded this week suggest that a first larvicide application should be made at 250 degree days post-biofix, which could accumulate in as few as 10 days (early next week).

John Aue of Threshold IPM Services advises growers using mating disruption (MD) to monitor traps just as diligently as other growers. There is evidence that the heavy flight is overwhelming the MD, at least in some

orchards using less than the full, recommended rate of the MD product. At a minimum, growers are encouraged to monitor traps within known CM hotspots.

**SPOTTED TENTIFORM LEAFMINER:** Moth counts were mostly low from May 24-30 and ranged no higher than 250 moths per trap. The average of 75 moths per trap is the lowest in several weeks and indicates that STLM populations are between the first and second flights. Numbers are expected to increase again by mid-June as the second flight starts. The economic threshold for STLM increases from 0.1 to one mine per leaf for the second generation of sapfeeder larvae.

**BROWN MARMORATED STINK BUG:** An adult stink bug was collected in a Dane County pheromone trap last week, marking the earliest recorded first capture date in Wisconsin. The previous earliest report was on June 9, 2017. Apple growers planning to monitor BMSB this season should set their traps soon to monitor potential June activity. It should be noted that the overwintering generation of BMSB is not known to cause economic injury to apples and sprays are not advised before third cover. Cooperators are reminded that the clear sticky panel traps now supplied by DATCP are baited with both a BMSB lure and a green stink bug (GSB) lure.



BMSB clear sticky panel trap

entomology.ces.ncsu.edu

**PLUM CURCULIO:** Apple growers are advised to continue scouting fruits for crescent-shaped oviposition scars. Recent high temperatures may have caused the beetles to move beyond the perimeter trees, so scouting farther into orchard interiors will be necessary. Perimeter applications can be used as an alternative to full cover sprays if injury is limited to the border rows. However, a cover spray is recommended if signs of PC extend beyond the first 4-5

rows of trees. Another strategy is to leave untreated "trap rows" of early varieties that are treated with an insecticide (e.g. PyGanic) on a warm night when the weevils are most active. Organic options include PyGanic (pyrethrin) applied to the outer rows and Surround WP (kaolin) on the interior trees.

**GRAPE PLUME MOTH:** Larvae are feeding on grape foliage and webbing together the terminal leaves of shoots in southern and western Wisconsin vineyards. The green caterpillars with whitish hairs commonly appear in late spring in perimeter rows near wooded areas. Their feeding on interveinal areas of leaves and characteristic webbing on young terminals is generally low-impact and control is usually not required.



Grape plume moth larva

Mike Cesarz

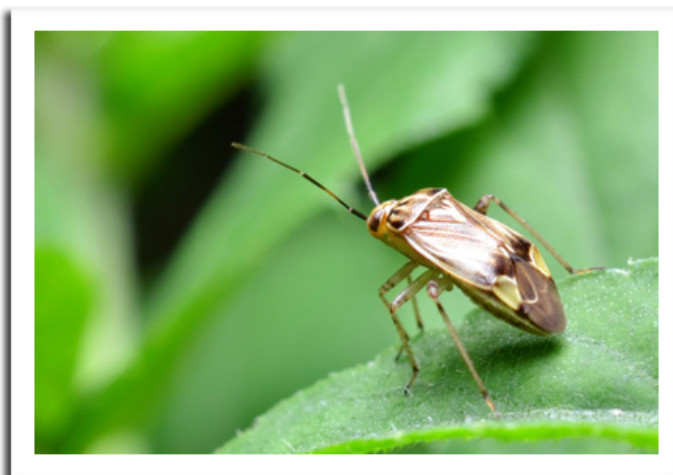
However, in exceptional cases when 20% of shoots show webbing or damage, spot treatment of infested rows with *Bacillus thuringiensis* var. *kurstaki* (Btk) may be considered. Since Bt must be ingested by larvae to be lethal, it is imperative to confirm the presence of caterpillars and treat only if the larvae are small enough that continued feeding is expected. Grape growers who notice shoots with young leaves webbed together are advised to unroll the leaf to verify that the larvae inside is grape plume moth.

**OBLIQUEBANDED LEAFROLLER:** The spring flight continued for the second week, with low numbers of moths registered in scattered orchard locations. Late-instar larvae and rolled leaves are still evident at some sites. 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 important since orchards that register even low counts (< five moths per trap) can develop significant larval problems a few weeks after a flight has occurred. Control is warranted for populations averaging three or more larvae per tree.

**WOOLY APPLE APHID:** Apple growers are advised to begin scouting areas infested with this aphid last season to confirm the first appearance of aerial colonies, expected to become noticeable by mid-June.

**PLANT BUGS:** Fruit growers can anticipate more plant bug adults appearing on apples, strawberries and other fruits as alfalfa harvesting accelerates in the coming week. Nymphs are abundant in alfalfa sweep net collections, and could contribute to problems in fruit crops next month. The economic threshold for this insect in strawberries is four per 20 sweeps.



Tarnished plant bug

Dan Simon [macrodan.tumblr.com](http://macrodan.tumblr.com)

## VEGETABLES

**STRIPED CUCUMBER BEETLE:** Adults are expected to become increasingly abundant by mid-June. Growers of cucurbits can begin inspecting plants for these yellow and black striped beetles, of greatest concern for their role as bacterial wilt vectors. Striped cucumber beetles introduce the bacterial disease into cucumbers, melons and squash through feces or contaminated mouthparts. The first symptom of bacterial wilt on cucumber and melon is a distinct flagging of lateral and individual leaves. Early beetle control may be justified for populations of one beetle per plant in melons, cucumbers and young pumpkins, and five beetles per plant for less susceptible cucurbits such as watermelon and squash.

**IMPORTED CABBAGEWORM:** Larvae are emerging statewide. Routine weekly scouting for the yellow eggs laid singly on plants and velvety green caterpillars with a yellow, longitudinal stripe is suggested. The economic threshold for this pest in cabbage is 30% infestation at the transplant to cupping stages.

**COLORADO POTATO BEETLE:** Oviposition has started across southern and central Wisconsin. The bright orange-yellow eggs deposited by the females are now detectable on the undersides of potato leaves. At normal June temperatures, the eggs hatch in 4-8 days and larvae mature to the third instar stage in another 5-9 days. These early individuals are usually less destructive than the summer generation. Treatment is justifiable for pre-flowering, 6- to 8-inch potato plants when defoliation exceeds 20-30%.



Colorado potato beetle eggs

[utmarketgarden.wordpress.com](http://utmarketgarden.wordpress.com)

**BLACK CUTWORM:** Home vegetable gardens and larger plantings should be monitored for signs of black cutworm feeding now that first-generation larvae are in the damaging late-instar stages. Beans, cabbage and other crucifers, carrots, celery, corn, lettuce, peas, peppers, potatoes and tomatoes are all susceptible to black cutworm injury during the transplant establishment period. Most cutworm damage occurs at night as the larvae feed on the stems of young plants at or slightly above or below the soil line. During periods of wet weather, the larvae usually cut plants at the soil surface.

## NURSERY & FOREST

**ROOT-BORNE ISSUES:** Several root-related plant maladies, favored by very warm temperatures and increase-

ed soil moisture, were recently noted by inspectors. Astilbe plants were diagnosed with root knot nematode (*Meloidogyne* sp.) and *Rhizoctonia* root rot, while prairie dropseed tested positive for *Fusarium* and *Phoma* root rots, with the latter related to maggots within the seed of the plant.

**RED SPOT ON PEONY:** Peonies at garden centers in Jackson, Monroe, and Trempealeau counties were infected with this fungal disease, characterized by small, circular, reddish or purplish leaf spots that appear on the upper surfaces of young leaves shortly before bloom. Later in the season, the lesions expand and merge to form large, irregular blighted areas. All above-ground parts of the peony are susceptible to red spot. Red spot is an aesthetic problem controlled by cutting back plants to ground level in fall and destroying infected foliage. Fungicides labeled for peony red spot are preventive and must be applied early in spring, when new shoots are 2-4 inches tall. Subsequent applications may be needed until the flowers begin to open.



Red spot on peony

Liz Meils DATCP

**NON-VIABLE NURSERY STOCK:** Most nursery plants that have not leafed out by now are considered non-viable and cannot be sold. Dry bulbs and trees and shrubs with plastic-wrapped roots are especially prone to moisture deficiency problems after distribution to retail stores and should be sold within three weeks of arrival. Non-viable stock may be set aside and observed for later growth, but otherwise must be destroyed or returned to the supplier.

**PLANT VIRUSES:** Potyviruses were again common in nursery samples, with several varieties of Iris, freesia, and sneezeweed testing positive from nursery dealers in Dane,

Kenosha, Monroe, and Washington counties. Tobacco rattle virus was detected among box-store *Dicentra* plants in Kenosha and Monroe counties. Viral symptoms typically begin as subtle light and dark green streaks or mottled patterns along the plant foliage, which can turn necrotic and increase susceptibility to other secondary diseases. As previously stated, industry-wide attention to selecting and maintaining virus-free breeding stock, consumer education to recognize plant virus symptoms, and the removal and proper disposal of infected plant materials are imperative for control.



Tobacco rattle virus on bleeding heart

Liz Meils DATCP

**FLEA BEETLES:** This common pest of many vegetables and nursery plants was observed at several retail garden centers in the past week, feeding on leafy seedlings and shrubs. Defoliation caused by flea beetles varies by leaf type and the flea beetle species involved, appearing as shot-holes, skeletonizing or lacy shredding on thinner leaves and a linear, leafminer-like pattern on the thicker, fleshy leaves of sedum and similar plants. Row covers, sticky traps, and insecticides may be used for prevention and treatment.



Flea beetle feeding on ninebark

Tim Boyle DATCP

**MAYAPPLE RUST:** Bright orange pustules were evident on the undersides of mayapples in La Crosse County. This annually occurring rust is very common in natural settings where it sporadically causes premature leaf drop. Removing infected plants may aid in control by reducing the source of inoculum.



Mayapple rust

Timothy Allen DATCP

## APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 24 - 30

COUNTY	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	DWB <sup>5</sup>	LPTB <sup>6</sup>	BMSB <sup>7</sup>	AM RED <sup>8</sup>	YELLOW <sup>9</sup>
Bayfield	Keystone	17	6	0	0		0			
Bayfield	Orienta	47	0	—	—	0	0			
Brown	Oneida	250	62	13	—	0	0			
Columbia	Rio	53	14	15	0		1			
Crawford	Gays Mills	115	21	3	4	52	29			
Dane	DeForest	8	17	12	6		6			
Dane	Mt. Horeb	21	28	18	—		26			
Dane	Stoughton	8	28	69	0		14			
Fond du Lac	Campbellsport	67	43	0	0	0	6			
Fond du Lac	Malone	33	23	13	0		29			
Fond du Lac	Rosendale	12	21	5	0		1			
Grant	Sinsinawa	—	—	44	—		—			
Green	Brodhead	3	11	19	0		17			
Iowa	Mineral Point	55	23	61	0		36			
Jackson	Hixton	32	36	7	1		7			
Kenosha	Burlington	260	6	22	0		7			
Marathon	Edgar	196	59	10	10		23			
Marinette	Niagara	54	3	0	0		7			
Marquette	Montello	162	121	0	0		17			
Ozaukee	Mequon	0	27	12	—		2			
Pierce	Beldenville	162	128	9	3		0			
Pierce	Spring Valley	68	38	1	0		36			
Racine	Raymond	99	1	24	2		8			
Racine	Rochester	40	49	71	0		23			
Richland	Hill Point	63	69	10	0		12			
Sheboygan	Plymouth	127	13	0	0		8			
Walworth	East Troy	60	18	0	—		8			
Walworth	Elkhorn	37	20	1	—		14			
Waukesha	New Berlin	45	10	30	5		7			

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller; <sup>5</sup>Lesser peachtree borer; <sup>6</sup>Dogwood borer; <sup>7</sup>Brown marmorated stink bug; <sup>8</sup>Apple maggot red ball; \*Unbaited; \*\*Baited; <sup>9</sup>Apple maggot yellow board.

COUNTY	SITE	BCW <sup>1</sup>	CEL <sup>2</sup>	CE <sup>3</sup>	DCW <sup>4</sup>	ECB <sup>5</sup>	FORL <sup>6</sup>	SCW <sup>7</sup>	TA <sup>8</sup>	VCW <sup>9</sup>	WBC <sup>10</sup>
Columbia	Pardeeville	0	0	0	0	7	1	0	8	0	0
Dodge	Beaver Dam	0	0	0	0	0	0	0	1	0	0
Fond du Lac	Ripon	0	2	0	0	2	0	0	7	0	0
Grant	Prairie du Chien	0	0	0	0	0	0	0	0	0	0
Manitowoc	Manitowoc	1	5	0	0	0	0	0	1	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	0	0	0	0	6	0	2	0	0	0
Rock	Janesville	0	1	0	0	0	0	1	17	0	0
Walworth	East Troy	0	0	0	0	3	0	0	2	0	0
Wood	Marshfield	0	0	0	0	0	0	1	1	0	0

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