

# 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

Summer-like warmth punctuated by showers and storms characterized the weather this week. Unsettled conditions prevailed as several low pressure systems moved through the region, bringing varying amounts of rain to much of the state. Daytime high temperatures were 10-15 degrees above seasonal normals and ranged from the 70s to upper 80s. Low temperatures were generally in the 50s and 60s. The warm, mostly dry weather promoted planting and other fieldwork across Wisconsin, with emphasis on planting soybeans and harvesting alfalfa. At the end of May, prospects for the state's field crops are favorable. Emergence of corn, oats and soybeans remains significantly ahead of the five-year averages and condition ratings for alfalfa, oats and wheat range from 82-89% good to excellent. Although this week's timely rain helped alleviate soil moisture deficits, more precipitation will be needed next month to support crop emergence and development.

## LOOKING AHEAD

**EUROPEAN CORN BORER:** Moths are depositing eggs on vegetable and weed hosts in southern and central locations where 450 degree days (modified base 50°F) have been exceeded. Snap beans, lima beans, peppers, potatoes and various weeds will be used for oviposition

until corn taller than 18 inches becomes available. The spring flight is expected to peak by June 9 near Beloit, La Crosse, Spring Green and other advanced sites.

**BLACK CUTWORM:** The primary damage period for corn is now open and could extend through mid-June this year. Crop consultants and corn growers should continue to inspect fields for evidence of this pest during the next 2-3 weeks or until plants have reached the five-leaf (V5) stage. A rescue treatment is justified if 3% of corn plants are damaged.

**ALFALFA WEEVIL:** Leaf tip feeding injury is expected to become more pronounced next week as larvae transition into the larger and most destructive third and fourth-instars. Alfalfa should be harvested as soon as possible to limit larval damage and avoid the need for insecticidal control.

**TRUE ARMYWORM:** Moth flights have been registered on warmer nights for the last five weeks and small larvae are appearing in low numbers in alfalfa sweep net collections. Small grains, corn and other susceptible crops are under a low to moderate threat of larval infestation and should be monitored next month for developing problems.

**CODLING MOTH:** Emergence of spring moths accelerated over the weekend of May 21-22 and the biofix was

set at several monitoring sites. Controls directed against first generation larvae are generally most effective when applied at approximately 250 or 350 degree days (modified base 50°F) after biofix, which is the equivalent of 17 or 23 calendar days at daily highs of 75°F and daily lows of 55°F. Exact treatment dates will vary by location and with early June temperatures.

## FORAGES & GRAINS

**ALFALFA WEEVIL:** Larval populations are increasing in first-crop alfalfa. Counts now range from 1-63 larvae per 100 sweeps and average 11 per 100 sweeps, compared to an average of five per 100 sweeps last week. Surveys indicate leaf tip feeding damage is still low at 5-10%, but this may change as larvae transition into the larger and most destructive third and fourth instars or if wet weather delays harvest. Any first-crop alfalfa that is not cut by early June could be degraded. Management plans at this time should include harvesting fields during the next rain-free period and monitoring regrowth for carryover of weevil larvae.

**GRASS SAWFLY:** Low numbers of these pale yellow, striped larvae have been found in scattered alfalfa fields. The caterpillar-like worms are the immature form of the grass sawfly, an insect belonging to the bee and wasp order, Hymenoptera. The larvae, which should not be mistaken for armyworms, are suspected of feeding on grasses and pose no threat to alfalfa.



Grass sawfly larva

Krista Hamilton DATCP

**PEA APHID:** This insect continues to be abundant in most of the state's alfalfa fields. Densities currently vary from 1-28 per sweep and average four per sweep. The scat-

## DEGREE DAYS JANUARY 1 - MAY 25

LOCATION	50°F	2015	NORM	48°F	40°F
Dubuque, IA	475	473	480	469	881
Lone Rock	451	449	—	438	817
Beloit	485	458	491	484	878
Sullivan	344	311	436	328	634
Madison	416	429	460	404	750
Juneau	353	366	—	343	649
Racine	317	268	—	309	625
Waukesha	344	311	—	328	634
Milwaukee	307	271	364	302	604
Hartford	344	311	—	328	634
Appleton	317	327	—	312	597
Green Bay	269	266	365	268	539
Big Flats	398	410	—	353	654
Hancock	398	410	449	353	654
Port Edwards	384	389	436	350	658
La Crosse	477	464	511	475	865
Eau Claire	434	385	447	416	766
Cumberland	387	329	388	360	652
Bayfield	252	226	—	222	396
Wausau	319	318	381	284	546
Medford	320	306	339	294	555
Crivitz	254	247	—	224	423
Crandon	288	266	308	242	452

*Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2016. NORMALS based on 30-year average daily temps, 1981-2010.*

tered showers of the past week are likely to promote the spread of fungal pathogens that regulate pea aphids and could contribute to a mid-June population collapse.

**POTATO LEAFHOPPER:** Surveys indicate the first distinct migration into Wisconsin of 2016 has occurred. Adult leafhoppers were collected from seven of the 70 alfalfa fields sampled from May 19-25, in Columbia, Dodge, Monroe and Vernon counties. This pest often arrives in Wisconsin around the time first alfalfa crop is harvested.

**PLANT BUG:** Nymphs of both the alfalfa and tarnished plant bug were collected from alfalfa for the first time this week. The tarnished plant bug is the more numerous of the two species.

## CORN

**BLACK CUTWORM:** Larvae resulting from flights of moths that oviposited in corn earlier this month are now

in the destructive late-instar cutting stages. Although the most important factors influencing their damage potential are pre-plant broadleaf weed problems and reduced tillage (especially fields with soybean residue), crop advisors and corn growers should be aware that infestations can develop in conventionally tilled and Bt fields as well. Timely detection of cutworm infestations is critical for insecticide treatments to be effective and economical. Scouting may be discontinued after the five-leaf (V5) stage.

**TRUE ARMYWORM:** Migrants have been collected in low to moderate numbers in the Janesville and Sparta black light traps throughout May. True armyworm flights sometimes precede larval outbreaks by 3-4 weeks, and these counts should be viewed as an early warning of potential problems.

**EUROPEAN CORN BORER:** The degree day model for this pest suggests egg deposition has started in areas of the state where 450 degree days (modified base 50°F) have accumulated, including Beloit, Lone Rock and La Crosse. If above-normal temperatures continue early next month, the first flight could peak by June 9 in the southwestern, south-central and west-central counties, June 16 in the southeastern and central areas, and a few days later in the north.



European corn borer moth

andrej macroid.ru

## SOYBEANS

**BEAN LEAF BEETLE:** Soybean fields in Columbia, Dodge and Sauk counties are showing 1-5% of plants with minor defoliation caused by this insect. Beetle counts are low and damage is currently limited to a few

holes in the leaves, but injury could become more severe early next month as additional beetles migrate to emerging soybeans.

**SOYBEAN APHID:** Colonization of the earliest emerging soybeans is likely to start in the week ahead. Surveys for aphids in south-central Wisconsin were negative as of May 25.



Soybean aphids

Krista Hamilton DATCP

## FRUITS

**SPOTTED TENTIFORM LEAFMINER:** Moth numbers were mostly low again this week. Counts ranged from 0-297 per trap and averaged 39 per trap, with the exception of high captures of 890 moths reported from Brown County and 672 moths collected in Marathon County. The overall low counts signal that apple orchards are between STLM flights and populations consist primarily of late-instar tissue feeder larvae. Numbers are expected to increase sharply in the next two weeks as the second flight begins. The economic threshold for STLM is one mine per leaf for the second generation of sapfeeder larvae.

**CODLING MOTH:** Fourteen of 23 reporting apple orchards captured their first moths of the season between May 21 and 25. Counts varied from 0-62 per trap and averaged six per trap. The spring biofix has been set in several southern and central Wisconsin orchards and growers should make preparations to apply controls at 250 or 350 degree days (modified base 50°F) from their specific biofix date. A first larvicide application made at 250 degree days from the biofix may be considered for orchards with high codling moth pressure. Orchards that register an inconsistent early flight, with a larger flight two

weeks after the first biofix, can delay the first spray until 350 degree days. Treatment during these windows is intended to eliminate most of the newly-hatched larvae before they enter fruits.



Codling moth eggs and newly-hatched larva

[ucanr.edu/blogs](http://ucanr.edu/blogs)

**OBLIQUEBANDED LEAFROLLER:** The first of two flights expected this season has begun following the accumulation of 600 degree days (simple base 43°F). Sampling of 10 fruit clusters and 10 terminals in the outsides, centers, and tops of five trees per orchard on a weekly basis is recommended after pheromone traps indicate that emergence of spring moths has started. Control is justified for populations of three or more larvae per tree.

**REDBANDED LEAFROLLER:** Counts of this pest also remained comparatively low during the May 19-25 reporting period. The first flight peaked about two weeks ago and counts have been on the decline since then. The second flight should start at most orchard locations by early to mid-June. Apple growers are reminded to replace pheromone lures for both RBLR and STLM in preparation for the second flights.

**PLUM CURCULIO:** Adult migration into orchard edges increased this week and feeding and oviposition scars are appearing on apples. Growers who applied a PC petal fall treatment should be aware that heavy rain will degrade insecticides and a perimeter application may be needed 7-10 days following a petal fall spray to prevent the further migration of PC into the orchard. Organic growers have the option of applying Surround® WP (kaolin clay) to orchard blocks. Another control 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.

## VEGETABLES

**BLACK CUTWORM:** Beans, cabbage, carrots, celery, corn, lettuce, peas, peppers, potatoes, tomatoes and other vegetable seedlings should be monitored during transplant establishment period for signs of black cutworm feeding, especially now that larvae from the major April-May migration have reached the damaging late-instar stages. Cutworms feed on the stems of young plants at the soil line and can be extremely damaging where transplants are planted through black plastic or a similar weed barrier. Heat that accumulates under the plastic may attract and provide a protective covering for cutworms, making them more difficult to control.

Minor cutworm feeding injury can usually be tolerated and damaged plants replaced. Insecticide rescue treatment using either sprays or granules in home gardens is not usually practical. Physical barriers such as tin cans, paper cups or styrofoam cups with bottoms removed are effective. Economic thresholds have been established for the following crops:

**CORN:** 3% of plants damaged

**SNAP BEANS:** Two larvae per row foot

**POTATOES:** Four larvae per row foot

**LEAFY GREENS:** 3% of stand affected



Black cutworm larva

[www.export.biocontrol.ch](http://www.export.biocontrol.ch)

**STRIPED CUCUMBER BEETLE:** Beetle emergence is under way and is expected to increase by mid-June. Protecting seedling and transplanted cucurbits with floating row covers, screens or cones can reduce the risk of bacterial wilt and is recommended for highly susceptible cucurbits such as cucumbers and melons. Any covering must be

removed once plants begin to flower to permit pollinator access and ensure subsequent fruit set. A count of one beetle per plant for melons, cucumbers, and young pumpkins and five beetles per plant for less susceptible cucurbits (watermelon, squash, older pumpkins) signals a high risk of bacterial wilt if the beetle population is not controlled. Seedlings are more susceptible to both feeding damage and disease and should be monitored at least twice weekly when plants are emerging.

**COLORADO POTATO BEETLE:** Adults continue to colonize potato fields and oviposition has started. Systemic insecticides applied at planting or emergence typically provide adequate control of the overwintered adults and first generation of larvae, but a foliar spray may also be needed if scouting indicates that early-season CPB pressure is higher than anticipated. The first of two foliar applications of an insect growth regulator or the biological insecticide Bt should be made at egg hatch and again 7-10 days later.



Colorado potato beetle eggs

ecotanjim.files.wordpress.com

**IMPORTED CABBAGEWORM:** Larvae have emerged across much of Wisconsin. Home gardens and larger cabbage plantings should be checked weekly for the yellow eggs laid singly on plants and for velvety green caterpillars with a yellow longitudinal stripe. The economic threshold for this pest in cabbage is 30% infestation at the transplant-to-cupping stages.

## NURSERY & FOREST

**CYLINDROSPORIUM LEAF SPOT:** This fungal leaf spot disease was diagnosed on spirea 'Magic Carpet' nursery stock from Douglas County. Symptoms include light

yellow leaf lesions that darken and coalesce over time, eventually forming large dead areas on the foliage of infected plants. Thorough sanitation and eliminating overhead irrigation are the recommended controls since CLS is spread by infected leaf litter and splashing water.



Cylindrosporium leaf spot on spirea

Tim Allen DATCP

**TOBACCO RATTLE VIRUS:** Recent nursery inspections in Iron and Oneida counties found tobacco rattle virus (TRV) on several Dicentra plants. This virus can be easily recognized on bleeding hearts by the bright yellow leaf discoloration it causes on normally green foliage.

Tobacco rattle virus infects over 400 plant species, including ornamentals and agricultural crops such as potatoes. There is no treatment for this increasingly common virus and infected plants must be destroyed to prevent TRV from spreading.



Tobacco rattle virus on Dicentra

Tim Allen DATCP

**HOSTA VIRUS X:** Discounted hosta plants in Douglas County were showing characteristic symptoms of hosta

virus X (HVX), namely irregular interveinal color-bleeding that causes hosta foliage to appear mottled and unhealthy. This incurable virus is easily spread via infected sap on cutting tools, and even by animal browsing. Infected plants should be disposed of in the garbage and not composted.



Hosta virus X on 'August Moon' Alan Windham University of Tennessee

**ROSE MOSAIC VIRUS:** This viral disease, caused by a complex of prunus necrotic ringspot virus and apple mosaic virus, was found this month on roses in Price and Vilas counties. Rose mosaic virus (RMV) may not directly kill plants, but infected roses can exhibit small, distorted flowers, poor flower production, early autumnal leaf drop, and reduced vigor and hardiness.



Rose mosaic virus on rose Tim Allen DATCP

Symptoms include yellow or orange zig-zag banding on the foliage that are usually most pronounced during cool weather. Rose mosaic virus chlorosis is generally unlike nutrient deficiency and can be diagnostic.

This virus is thought to spread through the use of infected root stock, cuttings and scionwood, or possibly through rare natural root grafts. It is generally considered to be non-contagious in the field. Infected plants should be destroyed as there is no cure.

**GLOEOSPORIUM (AND RMV) ON ROSE:** Several of the rose plants in the Price County nursery where rose mosaic virus was found were also infected with gloeosporium leaf spot, or rose anthracnose. Although leaf spot diseases like gloeosporium are usually not as damaging as viruses, they can cause severe defoliation and reduction in plant aesthetics and vigor. The occurrence of this and other fungal leaf spots can be minimized by limiting overhead watering practices, removing fallen diseased leaves and planting resistant varieties.



Gloeosporium and rose mosaic virus on rose Tim Allen DATCP

## APPLE INSECT & BLACK LIGHT TRAP COUNTS MAY 19 - 25

COUNTY	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	APB <sup>5</sup>	LPTB <sup>6</sup>	DWB <sup>7</sup>	AM RED <sup>8</sup>	YELLOW <sup>9</sup>
Bayfield	Keystone	4	18	0	0	0	0			
Bayfield	Orienta	0	1	—	—	—	—			
Brown	Oneida	890	52	6	0	0	0			
Columbia	Rio	—	—	1	0	0	0			
Crawford	Gays Mills	—	—	—	—	—	—			
Dane	DeForest	7	21	—	1	—	—			
Dane	Edgerton	65	9	—	—	9	—			
Dane	McFarland	106	21	0	—	—	—			
Dane	Mt. Horeb	38	9	3	0	8	1			
Dane	Stoughton	—	—	—	—	—	—			
Fond du Lac	Campbellsport	37	17	0	4	0	0			
Fond du Lac	Malone	16	6	3	0	0	0			
Fond du Lac	Rosendale	9	22	0	0	0	0			
Grant	Sinsinawa	—	3	12	—	—	—			
Green	Brodhead	4	10	0	0	34	0			
Iowa	Mineral Point	27	10	15	0	4	0			
Jackson	Hixton	20	13	6	0	5	0			
Kenosha	Burlington	25	5	6	—	40	0			
Marathon	Edgar	672	94	—	0	2	0			
Marinette	Niagara	36	4	—	—	—	—			
Marquette	Montello	83	51	0	—	—	—			
Ozaukee	Mequon	0	11	4	—	—	—			
Pierce	Beldenville	5	0	62	0	0	0			
Pierce	Spring Valley	33	35	2	0	0	1			
Racine	Raymond	64	3	0	0	4	0			
Racine	Rochester	84	15	12	0	2	2			
Richland	Hill Point	25	10	3	0	10	3			
Sheboygan	Plymouth	297	56	6	—	0	0			
Walworth	East Troy	5	11	0	2	0	0			
Walworth	Elkhorn	36	65	0	2	0	0			
Waukesha	New Berlin	1	1	0	0	0	0			

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller; <sup>5</sup>American plum borer; <sup>6</sup>Lesser peachtree borer; <sup>7</sup>Dogwood borer; <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>
Adams	Grand Marsh	1	0	0	0	0	0	0	0	0	0
Columbia	Arlington	0	0	0	0	0	0	0	7	0	0
Columbia	Pardeeville	0	0	0	0	0	0	1	0	0	0
Crawford	Prairie du Chien	0	0	0	0	0	1	0	1	0	0
Dodge	Beaver Dam	0	0	0	0	0	0	0	1	0	0
Fond du Lac	Ripon	0	2	0	0	0	1	0	5	0	0
Manitowoc	Manitowoc	0	0	0	0	0	0	0	7	0	0
Marathon	Wausau	0	0	0	0	0	0	0	9	0	0
Monroe	Sparta	0	0	0	0	0	2	0	0	0	0
Rock	Janesville	0	0	0	0	0	0	0	11	0	0
Walworth	East Troy	—	—	—	—	—	—	—	—	—	—
Wood	Marshfield	0	0	0	0	0	0	0	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.