

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

Showers and thunderstorms swept across the state during the early morning hours of June 22. The severe storms produced heavy downpours, damaging straight-line winds and flooding, with the greatest damage occurring in southwest Wisconsin. Rain diminished by Tuesday and conditions were mostly sunny and pleasant during the latter half of the week. Afternoon highs ranged from the mid-70s to upper 80s and were at or above-normal for this time of year. Low temperatures were in the low 50s to mid-60s. Crop development continued to progress rapidly across the state, despite surplus soil moisture and weed pressure. Overall, 84% of the corn crop was reported in good to excellent condition at the start of the week, equivalent to last week and five points higher than the same time last year. Consistent heat and less rain will be needed as crops enter the critical reproductive stages next month.

LOOKING AHEAD

JAPANESE BEETLE: Emergence of Japanese beetles has been observed in Dane, Racine and Rock counties as of June 24. Damage to fruit trees, ornamentals, nursery stock and field crops can be expected for the next two months across most of the state, with heaviest populations likely occurring in the western areas where

the beetle's range is expanding. Soil-applied systemic insecticide treatments should have been made 3-4 weeks in advance of beetle emergence and are no longer advised for southern and central Wisconsin.

SOYBEAN APHID: Counts remain extremely low in most soybean fields. Of the 43 sites surveyed from June 18-23, three had averages below two aphids per plant and 91% of the fields had no detectable aphid population. Routine monitoring for aphids should begin by early July.

EUROPEAN CORN BORER: Larvae are primarily in the first to third instars and will soon begin entering the midribs of corn leaves. The treatment window for first-generation corn borers is expected to close by June 30 in the southwestern and south-central counties and 1-2 weeks later elsewhere, following the accumulation of 1,100 degree days (modified base 50°F).

VIBURNUM LEAF BEETLE: Localized populations have been found in four Milwaukee County locations this month, all within a two-mile radius of Greendale. A delimitation survey is being planned by DATCP plant pest specialists to determine the extent of the infestation. Milwaukee County gardeners, landscapers, nursery stock growers and retailers should be alert to the characteristic, unique skeletonization of viburnum leaves caused by these insects and report suspected cases to the DATCP Nursery Program at DATCPnursery@wisconsin.gov.

Aggressive treatment with a contact insecticide is strongly recommended to prevent this new exotic pest from spreading.

FIREFLY: Reports suggest these insects are especially abundant this year. UW-Madison Insect Diagnostician PJ Liesch speculates that the population increase may coincide with a rise in slug and snail populations resulting from wet weather during the past two years. Immature fireflies feed on snails, slugs, worms and soft-bodied insects. The larvae even use slime trails of slugs and snails to locate their prey.



Firefly adult

Krista Hamilton DATCP

WESTERN BEAN CUTWORM: The annual flight began this week in Dane and Sauk counties. Based on average degree-day accumulations for this time of year, 25% of the moth population should emerge by July 16 as far north as Hancock in Waushara County. Corn in the pre-tassel stage is preferred for oviposition and should be inspected for eggs and small larvae as soon as the first moths are registered.

TRUE ARMYWORM: Minor larval infestations are common and many cornfields are showing 1-10% of plants with leaf edge feeding damage. Continued scouting is recommended throughout July since black light traps are registering locally heavy flights (271 moths at Janesville from June 18-24) and field conditions remain very favorable for armyworm problems.

FORAGES & GRAINS

POTATO LEAFHOPPER: Counts in second-crop alfalfa remain much the same as previously reported at less

DEGREE DAYS JANUARY 1 - JUNE 24

LOCATION	50°F	2014	NORM	48°F	40°F
Dubuque, IA	1056	—	996	1087	1701
Lone Rock	1004	—	—	1039	1609
Beloit	1057	—	1008	1084	1693
Sullivan	790	—	931	827	1334
Madison	984	—	956	1016	1572
Juneau	883	—	—	923	1444
Racine	716	—	—	761	1272
Waukesha	790	—	—	827	1334
Milwaukee	726	—	821	770	1276
Hartford	790	—	—	827	1334
Appleton	807	—	—	846	1363
Green Bay	722	—	813	776	1276
Big Flats	917	—	—	928	1424
Hancock	917	—	934	928	1424
Port Edwards	883	—	908	907	1409
La Crosse	1044	—	1054	1087	1680
Eau Claire	907	—	935	942	1498
Cumberland	784	—	845	804	1299
Bayfield	551	—	—	543	919
Wausau	750	—	830	771	1237
Medford	720	—	749	739	1205
Crivitz	658	—	—	680	1138
Crandon	638	—	655	637	1047

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2015. NORMALS based on 30-year average daily temps, 1981-2010.

than 0.5 adults and nymphs per sweep. Most fields are showing very low populations of only 0.1-0.3 per sweep. Economic counts of two or more leafhoppers per sweep in alfalfa 12 inches or taller have not been observed as of June 24.

ALFALFA WEEVIL: Larval populations are now less than 0.1 per sweep and pupation is occurring across southern and central Wisconsin. No significant alfalfa weevil problems are anticipated for the balance of the season.

PEA APHID: Populations of this insect have decreased since the previous report and currently average less than 0.5 per sweep compared to three per sweep last week. Alfalfa surveyed in central Wisconsin still had moderate counts of 6-10 per sweep, but counts have decreased considerably in the southern counties. The rainy, unsettled conditions this month favor the spread of fungal pathogens that regulate pea aphids and may be contributing to the population decline.

PLANT BUG: Surveys conducted as far north as Portage, Waupaca and Waushara counties yielded counts of only 0.1-1.2 adults and nymphs per sweep, which is still low in comparison to the economic threshold of five per sweep in alfalfa.

CORN

STALK BORER: Larval infestations remain light in most fields, seldom exceeding 10%. An occasional site in Jefferson and Sauk counties had injury rates of 15-20% in the first four edge rows, but significant damage was not expected since the corn plants were in the V7-V8 stages.

TRUE ARMYWORM: Another significant flight of 271 moths reported from Janesville suggests that corn and small grains growers should remain alert for larval infestations, particularly in corn with grassy weed pressure and wheat fields lodged during this week's severe thunderstorms.



True armyworm leaf feeding

Krista Hamilton DATCP

CORN ROOTWORM: Corn producers can expect to see the first beetles of the year in 1-2 weeks and evidence of root damage throughout July. Egg hatch has been under way since the second week of June and is intensifying.

EUROPEAN CORN BORER: Surveys found minor infestations affecting 1-14% of plants in a small number of fields sampled from June 18-24. First, second and third-instar larvae were the predominant development stages in southern Wisconsin. Control treatments will become less effective as boring into corn midribs and stalks begins in the week ahead. The optimal treatment window for first

generation larvae has opened as far north as Chippewa County with the accumulation of 800 degree days (modified base 50°F) and will close once 1,100 degree days have been surpassed.



European corn borer leaf feeding damage

Krista Hamilton DATCP

SOYBEANS

SOYBEAN APHID: Colonies are appearing gradually in soybean fields this season and have been found thus far in Dane, Green, Iowa, Juneau, La Crosse, Rock, Trempealeau, Vernon and Waushara counties. Only 10 of the 88 (11%) fields surveyed in the last two weeks have had detectable populations. Densities were below two aphids per plant and 10 per infested plant based on examination of 100 plants per field, with the highest total count of 45 aphids per 100 plants found in Iowa County.



Soybean aphids

Krista Hamilton DATCP

ROSE CHAFER: Light leaf feeding injury was observed on 1-12% of plants in fields examined in the last reporting

period. The economic threshold for rose chafer, bean leaf beetle, Japanese beetle and other soybean defoliators is 30% defoliation in the pre-bloom vegetative stages and 20% defoliation post-bloom.

FRUITS

APPLE MAGGOT: Emergence of the first flies of the season could start over the weekend of June 27-28. Initial apple maggot treatments should begin 7-10 days after the first fly appears on a yellow sticky trap and immediately if the fly is found on a red sphere, with later sprays following at 10- to 14-day intervals as long as flies are appearing on traps. A trapping density of 6-12 unenhanced red spheres per acre placed on the perimeter row is suggested. For traps enhanced with an AM attractant, the density can be reduced to one trap every 20 trees on the outside border. Orchards with a history of severe AM problems should also place a few traps in the orchard interior. The economic threshold for apple maggot control is one fly per unenhanced trap per week or five flies per enhanced trap per week.



Apple maggot fly

Werner Eigelsreiter bugguide.net

GRAPE PHYLLOXERA: Grape growers concerned about the appearance of phylloxera galls on grape foliage are reminded that insecticide treatments should have been applied at the first sign of gall formation earlier this month. No insecticide can reduce or eliminate the galls once they have formed on the leaves.

CODLING MOTH: The spring flight has peaked in most orchards, though counts remain high at some sites. Signs of fruit damage are becoming apparent. Economic counts of five or more moths per trap per week were

registered at 11 of 26 locations during the June 18-24 monitoring period. Larvicides or other controls should be maintained to prevent problems by the current and subsequent summer generation of larvae.



Codling moth entry in calyx

Steve Schoof NCSU

REDBANDED LEAFROLLER: The orchards in Dane and Iowa counties reported captures of 72-120 moths this week, indicating the second flight is increasing. Counts of this pest have been very low since the first flight subsided around late May, but are expected to increase markedly by early July.

JAPANESE BEETLE: Adults are emerging in southern and western Wisconsin and neonicotinoids or Neem oil repellent sprays must be applied soon, while populations are low and the beetles are still immigrating into the orchard. Neem oil is appropriate for organic systems and effective when applied repeatedly. PyGanic is another organically acceptable method for immediate contact control, but the material dissipates quickly if applied during the day. A third option is Surround WP (kaolin clay) which deters both Japanese beetle and apple maggots, although its efficacy against Japanese beetle is inconsistent.

SPOTTED TENTIFORM LEAFMINER: A high count of 1,280 moths per trap reported from Richland County indicates the second flight of moths should peak by early July across southern and central Wisconsin. The peak in flight activity can be expected a week or two later in the southeastern, east-central and northern areas. Control of second-generation leafminer larvae should be considered for populations that exceed one mine per leaf.

SAN JOSE SCALE: Crawlers are emerging from beneath scales in southern Wisconsin orchards. Treatments

should be applied once the yellow crawlers are active, but before their white, waxy coverings (white cap stage) start to form on the leaves and branches. Natural enemies often keep this pest regulated if these beneficials are not eliminated by broad-spectrum insecticides.



San Jose Scale crawler 'white cap phase' blogs.cornell.edu/jentsch/2014

VEGETABLES

SQUASH VINE BORER: Moths have been observed around pumpkins, zucchini and winter squash in Dane, Grant and La Crosse counties in the past week. Growers of these vine crops should begin checking susceptible plants for flat, brown eggs deposited at the base of stems once the moths are noticed. Control is required as soon as the eggs are found to prevent the larvae from boring into the vines. Gardeners may remove the eggs by scraping them off with a fingernail. Covering plants with row covers or netting to prevent egg deposition and placing yellow pheromone-baited sticky traps around plantings may also help to reduce SVB problems. A conventional insecticide or kaolin clay applied to the plant bases as a weekly spray during the three- or four-week egg laying period can provide protection if the sprays thoroughly cover the plant stems and are applied repeatedly to assure good control.

IMPORTED CABBAGEWORM: Moths are very active around gardens and egg laying has intensified. Damage caused by ICW is very conspicuous and the larvae are generally easy to find, making control of this insect relatively easy to accomplish in gardens and smaller plantings. For larger commercial cabbage crops, larval infestations should be assessed on weekly basis by examining 25-50 randomly-selected plants (depending

on field size) and recording the percentage of infestation. A plant is infested if eggs or caterpillars are found. Control decisions should be made based on a threshold of 30% infestation in the transplant to cupping stages and 20% infestation from the cupping to early head stages.

STRIPED CUCUMBER BEETLE: Heavy infestations are present in home gardens in Dane, Grant, Milwaukee, Racine and Sauk counties and larger production fields in southeastern Wisconsin. Beetles were exceedingly abundant at a Milwaukee County vegetable farm last week, where approximately 50% of the winter squash plants were infested with as many as 20 beetles per plant, and an average of four beetles per plant.



Striped cucumber and corn rootworm beetles westmadison.ars.wisc.edu

NURSERY & FOREST

APPLE SCAB: Ornamental crabapple trees in Washington and Winnebago counties were showing light leaf spotting symptoms associated with this fungal disease. Infected leaves initially develop brownish lesions that later turn black. These primary spring infections produce secondary spores which continue to infect leaves and fruits during wet periods throughout the growing season, often resulting in defoliation. Cultural practices such as pruning, planting resistant varieties and thorough sanitation can reduce the severity of apple scab. Fallen leaves should be disposed of in autumn to minimize inoculum available to start the infection cycle the following year. Fungicides may be needed for nursery stock in wet seasons when the disease is particularly severe.

COTTONY MAPLE SCALE: The white, cottony egg masses produced by this pest of deciduous trees and shrubs

were observed on maple 'Autumn Blaze' at a nursery in Winnebago County. Cottony maple scale is usually a minor nuisance pest, but populations are cyclical and peak every few years, at times causing significant branch and twig dieback. Chemical treatments directed against the crawler stage should be considered only after two consecutive years of heavy infestation. Light infestations can be pruned out.



Cottony maple scale

www.vniles.com

GYPSY MOTH: The second phase of the 2015 gypsy moth aerial treatment program is scheduled to begin June 26 with treatments in 11 Wisconsin counties: Barron, Crawford, Douglas, Dunn, Eau Claire, Richland, Rock, Rusk, Sawyer, Trempealeau and Vernon. This mid-summer treatment phase is intended to reduce populations by disrupting moth mating. Gypsy moth larvae are currently in the fifth and sixth instars and moth emergence is expected to start by early July.

DOWNY MILDEW: This common fungal disease was noted on 'Swenson' grape and avens in Oneida and Washington counties. Downy mildew is characterized by growth of whitish-gray mold on the lower leaf surface and corresponding yellowish-green or tan areas on the upper leaf surface. Its incidence may be reduced by controlling humidity levels and by spacing plants to increase air circulation.

BRONZE BIRCH BORER: Nursery inspectors found several river birch and 'Royal Frost' birch trees in Eau Claire County to be infested with this destructive wood-boring beetle. Adult bronze birch borers attack trees weakened or stressed due to drought, disease, sun exposure or nutrient deficiency. Larval feeding beneath the bark results in the girdling of branches and stems. Infested

trees develop characteristic swellings or bulges on the trunk around the feeding tunnels, making bronze birch borer relatively easy to identify. Immediate removal and destruction of infested birch is recommended since this insect kills its host within a few years.



Bark swellings caused by bronze birch borer DATCP Nursery Program

ROSE SLUG: The tiny green larvae of this sawfly were feeding on rose foliage in La Crosse County this week, and skeletonizing the leaves. Severe defoliation may be avoided by removing the larvae and damaged, lacy leaves. Horticultural oils or residual insecticides are also effective.



Rose slug sawfly

Krista Hamilton DATCP

APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 18 - 24

COUNTY	SITE	STLM ¹	RBLR ²	CM ³	OBLR ⁴	APB ⁵	LPTB ⁶
Bayfield	Keystone	3	1	0	0	—	—
Bayfield	Orienta	—	—	—	—	—	—
Brown	Oneida	50	0	10	5	0	18
Clark	Greenwood	6	20	0	15	0	24
Columbia	Rio	—	—	—	—	—	—
Crawford	Gays Mills	1280	25	0	4	0	12
Dane	Deerfield	482	28	20	4	—	—
Dane	DeForest	—	—	—	—	—	—
Dane	Edgerton	—	—	—	—	—	—
Dane	McFarland	356	50	6	—	—	—
Dane	Mt. Horeb	250	93	0	19	0	49
Dane	Stoughton	279	72	10	15	0	26
Dane	West Madison	190	120	3	16		
Fond du Lac	Campbellsport	100	0	0	23	0	22
Fond du Lac	Malone	135	20	22	24	0	3
Fond du Lac	Rosendale	21	6	2	6	0	7
Grant	Sinsinawa	—	—	—	—	—	—
Green	Brodhead	142	77	2	11	0	35
Iowa	Mineral Point	665	112	8	21	0	80
Jackson	Hixton	18	1	2	6	0	13
Kenosha	Burlington	675	42	3	33	1	29
Marathon	Edgar	1482	6	2	30	0	18
Marinette	Niagara	2	0	1	36	2	11
Marquette	Montello	—	—	—	—	—	—
Ozaukee	Mequon	—	—	—	—	—	—
Pierce	Beldenville	486	0	7	2	0	21
Pierce	Spring Valley	519	2	0	18	0	35
Racine	Raymond	984	17	5	32	0	48
Racine	Rochester	890	50	6	62	2	24
Richland	Hill Point	1280	41	15	20	0	26
Sheboygan	Plymouth	—	—	—	—	—	—
Walworth	East Troy	51	1	0	3	0	0
Walworth	Elkhorn	202	0	0	55	0	1
Waukesha	New Berlin	332	7	12	12	8	40

¹Spotted tentiform leafminer; ²Redbanded leafroller; ³Codling moth; ⁴Obliquebanded leafroller; ⁵American plum borer; ⁶Lesser peachtree borer.

COUNTY	SITE	BCW ¹	CEL ²	CE ³	DCW ⁴	ECB ⁵	FORL ⁶	SCW ⁷	TA ⁸	VCW ⁹	WBC ¹⁰
Columbia	Arlington	1	6	0	11	1	0	4	0	0	0
Columbia	Pardeeville	0	3	0	0	8	4	25	9	1	0
Crawford	Prairie du Chien	0	0	0	0	1	0	0	5	0	0
Fond du Lac	Ripon	0	0	0	0	4	68	0	39	0	0
Manitowoc	Manitowoc	0	0	0	0	0	0	2	11	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	—	—	—	—	—	—	—	—	—	—
Rock	Janesville	0	10	0	0	3	7	0	271	0	0
Walworth	East Troy	0	0	0	0	0	4	0	1	0	0
Wood	Marshfield	0	1	0	0	0	1	17	35	0	0

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