

# 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

Sunny skies returned following last week's unusually wet weather. The drier conditions and summer heat accelerated harvesting of alfalfa and other fieldwork, especially post-emergence herbicide and fertilizer applications. Overall, prospects for field crops are favorable, although development is highly variable and weed problems are widespread. The state average corn height was only 18 inches as of June 26, compared to 29 inches last season and a five-year average of 26 inches. Soybean emergence and growth has been more consistent and many fields in the southern portion of the state are at the beginning bloom stage. The weather of the past week also favored insect activity, and the first round of mid-season pests, such as apple maggot flies, Japanese beetles and western bean cutworm moths, are now appearing.

## LOOKING AHEAD

**WESTERN BEAN CUTWORM:** The first moths of the season were registered from June 23-29 in Adams, Calumet, Iowa, Marquette and Sauk counties. The very low counts of 1-2 per trap represent the start of the adult flight period. According to the western bean cutworm phenology model, 25% emergence of the annual population should occur by 1,320 degree days (base 50°F), or July 14 near Beloit, July 22 near Madison, August 2 near Eau Claire,

and August 12 near Green Bay. Scouting for egg masses and small larvae is advised once moths begin appearing in traps.

**EUROPEAN CORN BORER:** Larvae are primarily in the first and second instars, and whorl-feeding injury is apparent in a few isolated corn fields throughout the southern half of the state. The most effective treatment window for first generation corn borers will close near Beloit, Mineral Point, Monroe, Platteville, Spring Green and other advanced southern locations by July 4, but should remain open for another 1-2 weeks in the southeast, east-central and northern areas.

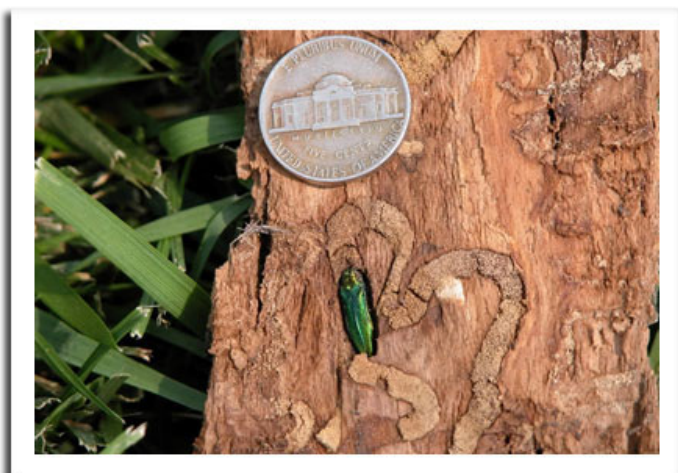
**SOYBEAN APHID:** Economic densities of 250 or more aphids per plant may begin to develop in some soybean fields in the next two weeks. Surveys in previous years have detected the first significant populations by the second or third week of July.

**CODLING MOTH:** Larvae are presently in the early to intermediate stages of growth, and now is an opportune time to check fruits for entry holes and frass to assess efficacy of earlier treatments. Moth counts varied from 1-30 per trap for the period of June 23-29.

**APPLE MAGGOT:** Emergence of this fruit fly has been noted in south-central and southwestern apple orchards. Low numbers were captured on yellow sticky traps at the

Mineral Point and Stoughton trap locations. The University of Wisconsin recommends 1 fly per UNBAITED trap (per week) or 5 flies per BAITED trap as the threshold for determining the need for control.

**EMERALD ASH BORER:** The first emergence of beetles this year was reported by June 22 in Oak Creek and Victory, areas with known infestations of the tree-killing pest. A comprehensive detection survey including 5,341 traps is now underway in 64 Wisconsin counties. Residents within 15 miles of an infestation concerned about their ash trees should consult with an arborist or tree care professional in the immediate future. A variety of treatments are available, though none are guaranteed to prevent or reverse an infestation.



Emerald ash borer

www.freshfromflorida.com

## FORAGES

**POTATO LEAFHOPPER:** Surveys in alfalfa indicate counts are low and range from 0.1-0.4 per sweep in the south-central and southwestern areas. Reproduction is expected to intensify with the heat predicted for next week. Economic counts of 1.0 per sweep for alfalfa 8-11 inches and 2.0 per sweep for alfalfa 12 inches or taller still have not been detected in any alfalfa field sampled by DATCP survey specialists.

**ALFALFA WEEVIL:** Larval populations in the southern half of the state have been reduced to less than 0.4 per sweep by pupation and harvesting of alfalfa. The threat from this early-season pest has subsided, although isolated problems could persist in some northern and east-central alfalfa fields for 1-2 more weeks. Continued scouting is advised for these areas.

## DEGREE DAYS JANUARY 1 - JUNE 29

LOCATION	50°F	2010	NORM	48°F	40°F
Dubuque, IA	1025	1265	—	1004	1797
Lone Rock	973	1225	—	960	1723
Beloit	1040	1330	—	1012	1823
Madison	915	1191	1056	916	1644
Sullivan	922	1241	1062	920	1655
Juneau	855	1170	—	864	1559
Waukesha	764	1097	—	791	1449
Hartford	750	1065	—	773	1418
Racine	682	1030	—	714	1354
Milwaukee	672	998	884	698	1325
Appleton	726	1052	934	759	1371
Green Bay	641	936	899	688	1270
Big Flats	776	1097	—	778	1431
Hancock	776	1119	1056	774	1434
Port Edwards	750	1060	989	759	1392
La Crosse	916	1216	1144	918	1650
Eau Claire	803	1093	1019	834	1473
Cumberland	710	979	968	735	1340
Bayfield	469	724	694	485	1019
Wausau	681	969	915	701	1280
Medford	697	967	819	709	1302
Crivitz	608	901	—	629	1213
Crandon	602	876	762	612	1165

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2011.  
 NORMALS based on 30-year average daily temps, 1971-2001.

**PEA APHID:** Alfalfa surveyed in Crawford, Iowa, Grant, Lafayette, Jefferson, Richland, Rock, Sauk and Vernon counties contained variable counts of 0.1-12.9 per sweep, with an average of 1.6 per sweep. Populations have shown an increase in the past two weeks and pea aphids are now the most abundant insect in alfalfa.

## CORN

**EUROPEAN CORN BORER:** Surveys failed to detect significant damage this week. Populations of first generation larvae were very low, with infestation rates ranging from 1-5%. Larvae varied in development from first- to third-instar and a few have begun entering the midribs of corn leaves. The treatment interval remains open for another 2-7 days in the south-central and southwestern counties and about two more weeks elsewhere. Field populations in corn fields examined as of June 30 have not justified control measures.

**CORN EARWORM:** The early migration of moths continued for the fifth week at the Hancock, Janesville, Prairie du Chien, Marshfield and Mazomanie pheromone trap sites. Numbers ranged from 3-35 per trap, with the high count registered near Hancock in Waushara County. Larvae are appearing in the earliest-planted sweet corn.

**STALK BORER:** Larval infestations remain light in most corn fields, seldom exceeding 5%, and then primarily near field margins. An occasional field in Grant and Rock counties had injury rates of 8-12% in the first four edge rows, but significant damage was not expected since the plants were at the V6-V7 stages.

**TRUE ARMYWORM:** The moth count at Janesville in Rock County increased sharply in the last week, from 28 to 104 per trap. This development emphasizes the need for continued inspection of corn and lodged grains throughout July.



True armyworm moth

[www.extension.entm.purdue.edu](http://www.extension.entm.purdue.edu)

## SOYBEANS

**SOYBEAN APHID:** Surveys show aphid populations remain below the economic threshold of 250 aphids per plant in Wisconsin soybeans. Of the 33 fields examined in the south-central and southwest areas from June 23-29, only 30% were found to have infestations. Several were 5-25% infested, with individual plants showing 1-46 aphids. Regular sampling should begin next week as many soybean fields enter the early reproductive stages of growth.

**BEAN LEAF BEETLE:** This insect is very common this season and light damage is evident in scattered soybean

fields throughout the state. Defoliation levels, however, have not exceeded 40% per plant in any field checked as of June 30, so treatment is not justified.

**JAPANESE BEETLE:** A crop consultant reports that these insects are causing moderate defoliation of soybeans in Rock and Walworth counties. Beetles are also appearing in high numbers in some traps around the state. Damage to soybeans, fruits, ornamentals and field crops is expected to intensify over the next six weeks and control may be warranted in some instances.

## SMALL GRAINS

**LEAF RUST:** This disease (*Puccinia triticina*) is developing in untreated fields in the southern part of the wheat-growing region of the state, from Rock County to Manitowoc County. Rust incidence and severity are currently very low, and with wheat well past flowering, damage is not expected. Neither stem rust nor stripe rust has been detected thus far.

**WHEAT DISEASES:** Surveys indicate powdery mildew (*Erysiphe graminis* f. sp. *tritici*) and tan spot (*Pyrenophora tritici-repentis*) are widespread, as always, but levels in most fields are very low to low. Infections are minimal on the most critical flag and flag-minus-one leaves. Loose smut (*Ustilago tritici*) and head blight (*Fusarium graminearum*) have been almost non-existent in surveyed fields this year, with symptoms of each detected in only one field, respectively.

## FRUITS

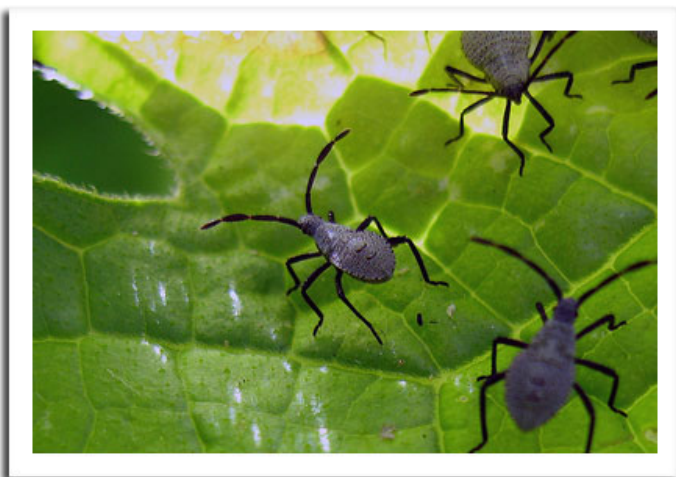
**SPOTTED TENTIFORM LEAFMINER:** The second flight of moths continued, with pheromone trap counts ranging from 5-720 per trap. The peak in flight activity should occur by July 16 throughout most of southern and central Wisconsin and a week or more later in the east central and northern areas. Apple orchards with populations greater than 1.0 mine per leaf or a history of infestation are candidates for control of second generation leafminer larvae.

**ROUGH STINK BUG:** Brown marmorated stink bug suspects collected in an orchard near Mequon were identified as the resident rough stink bug, *Brochymena arborea*. Apple growers participating in the brown marmorated stink bug (BMSB) detection survey should be aware of

this look-alike species. Unlike the BMSB, the rough stink bug lacks white bands on the antennae.

## VEGETABLES

**SQUASH BUG:** These insects are feeding on cucurbits at a few locations in the state, causing wilting symptoms similar to those of bacterial wilt. In contrast to bacterial wilt, plants affected by squash bugs usually recover once the insects have been controlled. The economic threshold is one egg mass per plant when plants are flowering.



Squash bug nymphs

shyzaboy flickr.com

**STRIPED CUCUMBER BEETLE:** Reports indicate activity has increased in the Malone area of Fond du Lac County. This beetle vectors bacterial wilt of cucurbits, infecting cucumbers, melons and squash through its feces and contaminated mouthparts. The treatment threshold is 4-5 beetles per 50 plants.

**SQUASH VINE BORER:** Pumpkins, squash, gourds and other vine crops in southern Wisconsin are susceptible to egg laying and larval infestation now that 900 degree days (base 50°F) have been surpassed. In the northern and east-central areas, scouting can begin in two more weeks.

**ASTER LEAFHOPPER:** Migrants have become increasingly common in field and vegetable crops since late June. Similar to the potato leafhopper, the aster leafhopper arrives on the southerly flow of warm air from the Gulf States. This species is of primary interest to carrot, celery and lettuce growers for its role as vector of aster yellows disease. Economic thresholds vary by crop, crop susceptibility, and infectivity rate, and range from 6-200 per

100 sweeps. The rate of infection by aster yellows has not been determined this season, but purple coneflower is highly susceptible to infection and can be used as an indicator plant. Infected plants exhibit chlorotic foliage and are commonly stunted or distorted.

## WEEDS

**SPOTTED KNAPWEED:** Plants are near the late bud stage in south-central areas and mowing to prevent seed production is advised at this time. This invasive and phytotoxic species produces an allelopathic chemical that inhibits growth of other plants, permitting it to spread rapidly in open areas. Control options include manual removal, mowing, repeated herbicide applications, burning, tillage, and use of biological control agents.

The Wisconsin DNR has established several spotted knapweed bioagent insectaries to provide local specimens for knapweed control. The objective is to produce, redistribute and introduce beneficial insects to eventually reduce knapweed infestations throughout the state.

## NURSERY & FOREST

**VERTICILLIUM WILT:** Eastern redbud trees at nurseries in Fond du Lac County were diagnosed with this fatal vascular disease, often misdiagnosed as decline caused by environmental factors. Symptoms are highly variable and may be acute or chronic. Acute symptoms include premature fall coloration, wilting, defoliation, branch dieback and death, whereas chronic symptoms typically reflect damage from earlier infections and may include delayed growth, sparse foliage, stunted leaves and twigs, leaf scorch and abnormally heavy seed production.

Trees showing severe wilt and dieback cannot be saved, although regular watering during dry periods may reduce symptom severity. Infected plants should be replaced with a resistant variety such as aspen, beech, sycamore, poplar, willow, or any conifer.

**FIR-FERN RUST:** This needle rust is prevalent on balsam firs grown in close proximity to ferns in a northern Clark County nursery field. Symptoms on firs include chlorotic, yellow needles with white pustules on the undersides. Infected needles dry out and drop prematurely, often in quantities that render trees unmarketable at fall harvest.

Management options include removing alternate fern hosts, particularly bracken ferns, from the periphery and within fields by mowing or applying herbicide sprays.



Fir fern rust

Konnie Jerabek DATCP

**MAPLE PETIOLE BORER:** 'Autumn blaze' and 'Amur' maples in Calumet and Fond du Lac counties are exhibiting withered, flagged leaves caused by larvae of the maple petiole borer. Boring within the petioles results in premature leaf drop, after which the larva emerges to pupate in the soil. This is primarily a cosmetic pest and no corrective action is needed.



Flagged leaves caused by maple petiole borer

Liz Meils DATCP

**SPRUCE BUDWORM:** Defoliation and vacant pupal cases were noted on Black Hills spruce in a Clark County nursery, suggesting that moth flight has begun. Larvae of this insect initially mine the needles, buds, and new cones, and feed on current foliage after bud flush. Older larvae prefer new foliage but will feed on older needles if current foliage has been depleted. Budworm feeding occurs from

late April through June. Control is most effective in spring during shoot expansion.

**FRASER FIR CONING:** Fraser firs in the north-central area are producing early cones in response to stress. These cones should be removed by hand as early in the season as possible. Cone production requires energy that fir trees would otherwise allocate toward new buds and shoot growth. In addition, the cones generally drop off during harvest in fall, leaving trees with large bare spots.



Fraser coning

Konnie Jerabek DATCP

**EASTER SPRUCE GALL ADELGID:** The pineapple-shaped galls that form when needles are injured by adelgid feeding were conspicuous on Black Hills spruce in northern Wisconsin. Eventually the galls dry, turn brown and split open, at which time the mature nymphs inside emerge, usually from mid-August to October. Dormant oil applied in October and November, or in April, is effective against this conifer pest.

**MEADOW SPITTLEBUG:** Spittle masses were abundant on Scots pines in Clark County. Feeding by spittlebugs can be especially damaging to tender new shoots on smaller, transplant seedlings. The nymphs inside were nearly full-grown and will develop into adults in the next two weeks.

**GYPSY MOTH:** This year's mating disruption treatments began on June 28. Approximately 9,500 acres were treated in northeastern Grant County. Additional treatments will be applied after July 4 at sites in Bayfield, Burnett, Chippewa, Clark, Douglas, Dunn, Eau Claire, Jackson and Sawyer counties.

## APPLE INSECT & BLACK LIGHT TRAP COUNTS JUNE 23 - 29

COUNTY	SITE	STLM <sup>1</sup>	RBLR <sup>2</sup>	CM <sup>3</sup>	OBLR <sup>4</sup>	OBLR <sup>5</sup>	AM RED <sup>6</sup>	YELLOW <sup>7</sup>	GDD 50°F
Bayfield	Keystone	8	0	0	0				
Bayfield	Oriente	0	0	0	0				
Brown	Oneida	560	0	9	2				
Chippewa	Chippewa Falls	—	—	—	—				
Columbia	Rio	720	19	4	7				
Dane	Deerfield	573	8	4	17				
Dane	Mt. Horeb	0	59	2	7		0	0	
Dane	McFarland	157	20	15	83		0	0	
Dane	Stoughton	83	60	5	7	1	0	3	828
Dane	West Madison	27	59	3	9		0	0	
Fond du Lac	Campbellsport	50	0	0	22				
Fond du Lac	Malone	130	0	7	23				
Fond du Lac	Rosendale	21	6	2	0		0	0	
Grant	Sinsinawa	—	—	—	—				
Green	Brodhead	5	57	4	7	5	0	0	
Iowa	Mineral Point	210	53	7	5	2	0	3	829
Jackson	Hixton	12	2	1	2	0	0	0	
Kenosha	Burlington	200	15	6	20				719
Marinette	Niagara	226		30	36				546
Marquette	Montello	148	1	0	0		0	0	839
Ozaukee	Mequon	5	0	6	5				684
Pierce	Beldenville	324	0	10	21	4	0	0	
Pierce	Spring Valley	56	0	1	0	2	0	0	
Polk	Turtle Lake	0	0	3	10		0	0	
Racine	Raymond	250	0	13	4				
Racine	Rochester	448	21	17	19		0	0	754
Richland	Hillpoint	130	2	0	4	0			
Sheboygan	Plymouth	10	1	1	10				687
Walworth	East Troy	—	3	1	3		0	0	
Walworth	Elkhorn	—	4	0	2		0	0	
Waukesha	New Berlin	0	0	20	18				

<sup>1</sup>Spotted tentiform leafminer; <sup>2</sup>Redbanded leafroller; <sup>3</sup>Codling moth; <sup>4</sup>Obliquebanded leafroller EASTERN; <sup>5</sup>Obliquebanded leafroller WESTERN; <sup>6</sup>Apple maggot red ball; \*Unbaited AM trap; \*\*Baited AM trap; <sup>7</sup>Apple maggot yellow board.

COUNTY	SITE	ECB <sup>1</sup>	TA <sup>2</sup>	BCW <sup>3</sup>	SCW <sup>4</sup>	DCW <sup>5</sup>	CE <sup>6</sup>	CEL <sup>7</sup>	WBC <sup>8</sup>	FORL <sup>9</sup>	VCW <sup>10</sup>
Chippewa	Chippewa Falls	3	0	0	0	0	0	0	0	0	0
Columbia	Arlington	12	34	0	1	0	0	4	1	1	0
Dane	Mazomanie	0	4	0	2	0	0	0	0	0	0
Grant	Prairie du Chien	1	1	0	0	0	0	4	0	0	0
Manitowoc	Manitowoc	0	11	0	10	0	0	3	0	0	0
Marathon	Wausau	—	—	—	—	—	—	—	—	—	—
Monroe	Sparta	5	3	0	0	0	0	0	0	0	0
Rock	Janesville	0	104	0	0	0	0	20	0	5	0
Walworth	East Troy	0	3	0	3	0	0	1	0	3	0
Wood	Marshfield	11	16	1	19	0	0	6	0	0	2

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