

# 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

A warming trend accompanied by persistent dryness continues to threaten prospects for summer crops. After a fairly cool start to the week, intense heat enveloped the state, with highs reaching the mid-90s on several days. Humidity levels also increased abruptly as the heat index surged to 100-105°F on Thursday. Virtually no rain fell in the southern and central areas, while significant precipitation was generally confined to a few isolated locations in the north. Less-than-adequate soil moisture levels coupled with above-average temperatures caused 2-3% declines in corn and soybean condition ratings during the week. Sixty percent of the state's corn crop is currently rated as good to excellent, compared to 63% last week. In addition, topsoil moisture is now over 75% short to very short in the three southern crop reporting districts. Although a few weak systems may bring localized showers and storms to the state over the next few days, widespread, appreciable rain is not expected next week.

## LOOKING AHEAD

**EUROPEAN CORN BORER:** Pupation of first generation corn borers has started near Beloit, Lone Rock, Madison, Sullivan and other advanced locations. Black light traps could register the earliest moths of the summer flight by June 29. Surveys indicate that larvae from the spring

flight are presently in the second to fifth instars. The treatment window for first generation larvae has closed statewide, with the exception of the far northern counties.

**CORN ROOTWORM:** Beetles appeared this week in low numbers in Dane, Monroe and Richland counties. These insects will become increasingly abundant next month, with the peak of emergence expected by mid- to late July. If lodging occurs, close examination of the roots is advised to verify that the cause of injury was feeding by corn rootworm larvae. Growers of Bt-rootworm corn hybrids expressing the Cry3Bb1 protein who experience poor root protection this season and suspect resistance should notify their seed company representative.

**WESTERN BEAN CUTWORM:** The emergence of western bean cutworm adults accelerated this week at southern and central trap locations. Egg deposition in corn and other susceptible hosts is in progress. The high count for the reporting period of June 21-27 was 92 moths at Wautoma in Waushara County.

**TWO-SPOTTED SPIDER MITE:** Conditions are very conducive for outbreaks of this pest. Soybean and corn growers, especially those in the dry southern and east-central counties, are encouraged to monitor fields every 4-5 days for developing problems. Early detection and control is critical because damaging infestations can develop rapidly during periods of extreme dryness.

**JAPANESE BEETLE:** Adults have become increasingly noticeable in yards and home gardens across the state. Numbers are low at this time, but heavy feeding on grapes, lindens, raspberries, roses and many other plants should be anticipated in the next 5-7 weeks. As a reminder, trapping in residential areas may attract more beetles than normally would be present and is not a recommended form of control.



Japanese beetles

audreyajones flickr.com

## FORAGES

**POTATO LEAFHOPPER:** Adults and nymphs are numerous throughout much of the state, especially in the central and southern areas. Counts in Green Lake and Fond du Lac counties ranged as high as 3.9 per sweep this week and averaged 2.6 per sweep, which is well above the threshold of 2.0 per plant for 12-inch alfalfa. Numbers in Columbia, Dodge, Green, Jefferson, Lafayette, Rock and Sauk counties were more variable at 0.2-4.5 per sweep, but still comparatively high in untreated fields. Economic counts of 2.0 or more per sweep were noted in 18 of 42 (43%) fields checked in these counties from June 21-27. Above-average temperatures accompanied by dry conditions have caused a marked increase in populations and damage this month, and controls are being applied. Regular monitoring of the third crop will be required next month.

**GRASSHOPPERS:** Populations of this pest, like the potato leafhopper, have increased in response to the hot, dry weather. Several Adams, Columbia, Juneau and Monroe County alfalfa fields ranging from 11-21 inches tall contained as many as 4-6 per sweep along the field margins. Severe damage has not been noticed thus far,

## DEGREE DAYS JANUARY 1 - JUNE 27

LOCATION	50°F	2011	NORM	48°F	40°F
Dubuque, IA	1377	988	1060	1350	2314
Lone Rock	1365	937	—	1305	2263
Beloit	1421	1001	1073	1348	2364
Madison	1344	879	1019	1299	2246
Sullivan	1325	886	994	1263	2224
Juneau	1269	821	—	1224	2144
Waukesha	1162	732	—	1119	2012
Hartford	1150	717	—	1116	1994
Racine	1107	651	—	1101	1958
Milwaukee	1088	641	883	1078	1929
Appleton	1142	694	938	1128	1985
Green Bay	1057	612	872	1076	1886
Big Flats	1204	746	—	1143	2031
Hancock	1201	745	996	1141	2033
Port Edwards	1145	720	967	1100	1965
La Crosse	1329	880	1121	1287	2229
Eau Claire	1175	770	996	1157	2029
Cumberland	989	681	905	999	1797
Bayfield	766	447	—	781	1443
Wausau	1013	652	889	1005	1788
Medford	1008	668	804	1033	1799
Crivitz	973	583	—	989	1761
Crandon	898	578	701	897	1623

Method: ModifiedB50; Sine48; ModifiedB40 as of Jan 1, 2012.  
NORMALS based on 30-year average daily temps, 1981-2010.

but the grasshoppers are expected to migrate to corn, soybeans and other crops as alfalfa is harvested.

**VARIEGATED CUTWORM:** Larval infestations have largely been reduced by pupation and treatment of many fields in the past 2-3 weeks. Another generation is anticipated next month or in August. The pupal stage usually lasts 2-4 weeks before second brood moths emerge.

## CORN

**WESTERN BEAN CUTWORM:** The first significant captures of 36-92 moths were registered at Sparta and Wautoma in the past week. Peak flight (50% emergence of the population) should occur around 1,422 degree days, or from July 1-15 at most sites. Degree day accumulations (base 50°F) as of June 27 were 1,421 at Beloit, 1,344 at Madison, 1,201 at Hancock and 1,142 at Appleton. Oviposition on corn and dry beans has been underway for two weeks and is intensifying. Corn fields in

Columbia and Sauk counties are showing eggs and small larvae. Treatment may be required for field corn with infestations affecting 5% of the plants at 90-95% tassel emergence. The economic threshold is 4% for processing sweet corn.



Western bean cutworm eggs Mark Moore, Moore Communications

**EUROPEAN CORN BORER:** Larvae from the spring flight of moths are generally in the intermediate to late development stages and evidence of their feeding was observed in a few fields this week. Examination of grain corn in the south-central, southwest and central districts found second- to fifth-instar larvae in 16% of surveyed fields. Leaf feeding was apparent on a maximum of 24% of plants and no economic populations were noted.

**YELLOWSTRIPED ARMYWORM:** Light injury attributed to this insect was found in scattered fields in Columbia, Dodge, Sauk and Vernon counties. Approximately 2-14% of the plants showed ragged leaves with defoliation occurring from leaf edge toward the midrib, similar to the pattern of feeding caused by true armyworm. According to the Entomological Society of America's (ESA) Handbook of Corn Insects, "Control with insecticides is not economical unless feeding causes heavy damage (defoliation greater than 50%)."

**VARIEGATED CUTWORM:** Larval infestations have subsided due to pupation and chemical treatment of many fields, but there is a remote possibility for new infestations and isolated areas requiring treatment in the next few days. Continued scouting is recommended for the far northern counties.

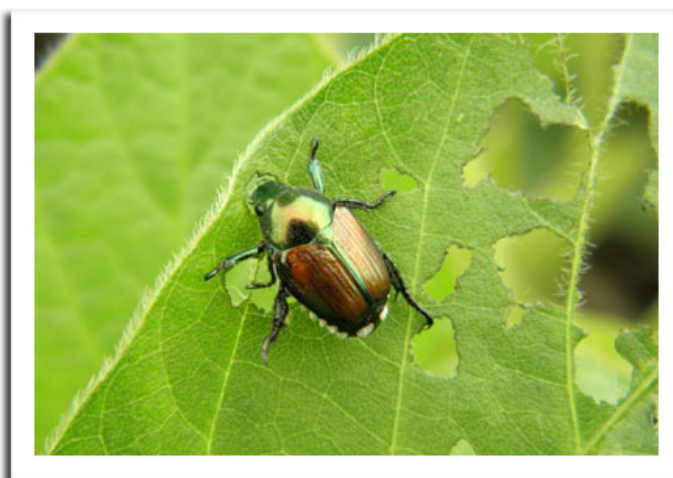
**CORN EARWORM:** Southerly winds to the east of a cold front directed a few moths into the state from southern

source regions. The pheromone traps near Ripon in Fond du Lac County registered counts of 35-41 moths from June 21-27. With field corn tasseling rates increasing across the state and sweet corn fields already at critical stages, growers should continue to monitor fields for isolated moth flights. A low migration risk is predicted for the next five days.

## SOYBEANS

**SOYBEAN APHID:** Colonies have become slightly more common in soybeans, but densities remain extremely low. Surveys this week found populations of only 1-3 aphids per infested plant in 11 of 60 (18%) fields examined. All soybean fields should be checked for aphids next week and consistently throughout July and August.

**JAPANESE BEETLE:** Minor defoliation was encountered in soybeans in Dane, Monroe, Richland and Vernon counties. The incidence of leaf feeding is increasing as more beetles emerge, but severity is low. Densities of beetles can vary greatly between the field interior and border rows, emphasizing the importance of thorough inspection of all areas of corn and soybean fields before making control decisions. In most instances, soybeans can tolerate substantial defoliation without reduction in yield potential, although a rescue treatment may be warranted if defoliation levels exceed 30% prior to bloom and 20% between bloom and pod fill.



Japanese beetle

Krista Hamilton DATCP

**TWO-SPOTTED SPIDER MITE:** Symptoms are appearing in a few fields in the southern and central areas, indicating that growers should begin monitoring soybeans at 4- to 5-day intervals for the characteristic bronzing and



stippling associated with early mite infestation. Soybean fields in the abnormally dry southern half of the state are particularly susceptible to infestation this season. Mite populations could explode during bloom if the dryness continues.

## FRUITS

**APPLE MAGGOT:** Emergence has increased in some apple orchards, while others have not yet captured a single fly. The high count for the period of June 21-27 was seven flies on a baited red ball trap at Plymouth in Sheboygan County. On the basis of current degree day accumulations, peak emergence of the fly population should occur from July 7-21 at most sites.

**CODLING MOTH:** The first flight has declined at some locations and continued at others. The summer flight of moths should begin in the next 1-2 weeks. Apple growers are advised to check their records for the spring biofix to estimate the second biofix, which generally occurs 1,000 degree days (base 50°F) later in a typical year. Approximately 750-950 degree days have accumulated since the first biofix on May 3-4 or 12. In preparation for the summer flight, growers should replace pheromone lures and begin more frequent trap checks.



Codling moth larva

*Keyy3534 flickr.com*

**SPOTTED TENTIFORM LEAFMINER:** The second flight continued, with pheromone trap counts ranging as high as 962-1,600 moth per trap at Beldenville, Hillpoint and Rio. The peak in flight activity is expected by the first week of July throughout southern and central Wisconsin and a week or more later in the east-central and northern areas. Egg laying is likely to be very heavy as long as the

moths are numerous. Apple orchards with populations greater than one mine per leaf or a history of infestation are candidates for control of second generation leafminer larvae.

## VEGETABLES

**COLORADO POTATO BEETLE:** Larvae in all stages of development were numerous this week on potato foliage in home gardens in southwest and west-central Wisconsin. Most were in the third and fourth instars as of June 27. Potato plants can generally withstand defoliation levels of 5-10% at flowering and 30% during tuber formation before yield is affected. The summer generation of beetles is expected to appear in the next 1-2 weeks.



Colorado potato beetle larvae

*Krista Hamilton DATCP*

**POTATO LEAFHOPPER:** Counts in potatoes, alfalfa and other crops are now above-threshold at many sites throughout the state. Feeding by the adults and nymphs causes leaves to curl and turn yellow, a symptom known as "hopperburn". Most yield loss due to this pest occurs before hopperburn is apparent, making routine scouting imperative. In 'Russet Burbank' potatoes, insecticide treatment should begin immediately if counts exceed 1.5 adults per sweep and within 5-7 days at rates of 1-1.5 adults per sweep.

**SQUASH VINE BORER:** Home gardeners are advised to continue inspecting pumpkins, squash and zucchini for flat, brown eggs deposited at the base of stems. The larvae of this insect bore into the stems of plants upon hatching, necessitating control as soon as the eggs are noticed. The first sign of infestation is plants that wilt during the afternoon hours.



Squash vine borer larva

Julie sanguinaria-budding.blogspot.com

## WEEDS

**GLYPHOSATE RESISTANCE:** Extension Weed Scientists at the UW-Madison report that a population of glyphosate-resistant giant ragweed has been found in Rock County, representing the first confirmed case of weed resistance to glyphosate in Wisconsin. The widespread utilization of glyphosate and glyphosate-resistant crops has substantially increased selection for weed resistance to glyphosate, and more cases of resistance will inevitably develop if farmers are not proactive about resistance management.



Giant ragweed

Krista Hamilton DATCP

Signs of herbicide resistance can be difficult to recognize in a field setting, but growers can isolate probable causes by process of elimination. Common reasons for ineffective weed control include: late herbicide application, excessive rainfall too soon after application, sprayer skips, reduced herbicide rates and applications made too early.

Indicators that weed “escapes” are the result of human or environmental causes include the presence of multiple weed species, a spatial arrangement that follows the path of herbicide application, or a uniform lack of response to herbicides within a field. By contrast, characteristics of herbicide resistance include moderate to high densities of a single weed species, random patterns or patchy distribution of the same species field-wide, variable response to herbicide, and vigorous plants next to dead plants of the same species.

If herbicides were applied on time, at an effective rate, yet fields contain many escapes of one weed species, growers should consult their county agent or a crop advisor.

**WEEDS IN SOYBEANS:** Herbicide applications in soybeans should not be delayed, especially for drought stressed fields. Yield reductions due to weeds are greater during dry periods as compared to when moisture levels are adequate. Early morning applications, at slower-than-normal speeds, are most effective since leaf surface exposure is greatest at this time and dust interference is minimal.

## NURSERY & FOREST

**EASTERN SPRUCE GALL ADELGID:** The pineapple-shaped galls that form when needles are injured by adelgid feeding were conspicuous on Black Hills spruce in Dunn and Polk counties. Eventually the galls dry out, turn brown, split open, and the mature nymph inside emerges, usually from mid-August to October. Dormant oil treatments are not effective against this pest at this time of year, but should instead be made from October-November, or in April.

**LINDEN BORER:** Larvae and sawdust-like frass were found on 3-5 inch diameter littleleaf linden trees in Polk and Shawano counties. This destructive wood-boring beetle attacks both vigorous and stressed nursery trees, causing structural weakening that often results in broken trunks or limbs. An early symptom of attack is thinning of the tree canopy. Immediate removal and destruction of infested nursery stock is required to prevent further spread.

**BLACK KNOT:** A light infection on ‘Schubert’ chokecherry trees was noted in Brown County earlier this week. This

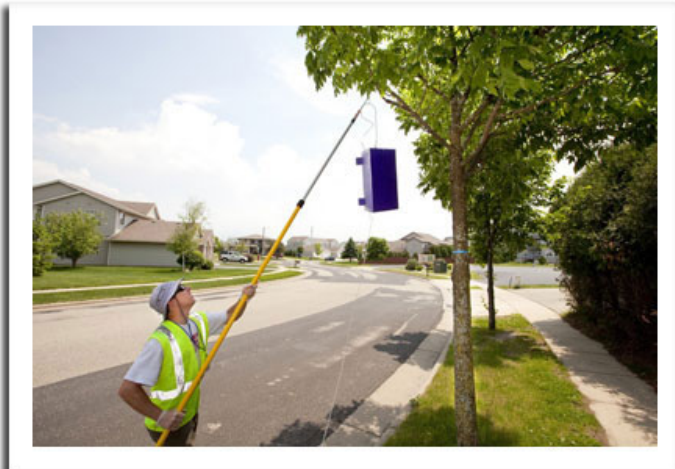


common fungal disease is characterized by irregular, black swollen galls or 'knots' which form on branches and can range in size from ½ inch to one foot long. Shoots and branches bearing knots should be pruned in winter or early spring, before fungal spores are released. Multiple infections of black knot reduce tree vigor and eventually cause decline. Nursery trees with knots on the trunk must be removed from sale.



Black knot on 'Schubert' Chokecherry Marcia Wensing DATCP

**EMERALD ASH BORER:** An emerald ash borer (EAB) beetle was collected on June 22 from residents in the City of Janesville. The specimen was confirmed as EAB on Monday, June 25. In addition, at least one tree on the property was found to be heavily infested.



Scott Schumacher hanging an EAB trap Steve Apps WI State Journal

Emerald ash borer has also been detected for the first time on state-owned lands. Beetles were captured on two separate survey traps in the Richard Bong State Recreation Area in Kenosha County and verified as EAB

last Friday. Visitors to RBSRA will no longer be allowed to remove firewood from the park.

The tree-killing emerald ash borer has now been found in 11 Wisconsin counties: Brown, Crawford, Kenosha, La Crosse, Milwaukee, Ozaukee, Racine, Vernon, Walworth, Washington and Waukesha.

**LEAF SCORCH:** A wide assortment of nursery plants across the state are exhibiting leaf scorch, characterized by browning of the leaf margins and yellowing or darkening of tissues between the primary veins. This physiological disorder is common in trees and shrubs that are stressed due to drought, transplanting, nutrient deficiency, inadequate space for root growth and soil compaction. Affected plants generally recover once the stress factor has been resolved.



Leaf scorch on amelanchier Marcia Wensing DATCP

## APPLE INSECT &amp; BLACK LIGHT TRAP COUNTS JUNE 21 - 27

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	21	0	0	1		0	0	
Bayfield	Oriente	18	0	0	1		—	—	
Brown	Oneida	100	51	8	11		—	—	
Chippewa	Chippewa Falls	—	55	7	7		*1	0	
Columbia	Rio	1600	30	2	0		0	0	
Crawford	Gays Mills	639	140	0	1		0	0	
Dane	Mt. Horeb	176	146	3	9		0	0	
Dane	Stoughton	90	45	6	1		0	0	
Dane	West Madison	117	119	10	0		—	—	
Dodge	Brownsville	0	4	2	7		0	0	
Fond du Lac	Campbellsport	30	50	0	10		0	0	
Fond du Lac	Malone	28	105	11	3		0	0	
Fond du Lac	Rosendale	96	51	0	4		0	1	
Grant	Sinsinawa	3	—	6	11		—	—	
Green	Brodhead	0	9	4	0		0	0	
Iowa	Mineral Point	295	170	2	2		0	**2	
Jackson	Hixton	62	13	2	16		0	0	
Kenosha	Burlington	220	143	2	20		—	—	
Marathon	Edgar	578	7	22	34		0	0	
Marinette	Niagara	311	0	0	24		—	—	
Marquette	Montello	39	16	11	7		—	—	
Ozaukee	Mequon	60	41	8	1		*1	0	
Pierce	Beldenville	962	24	12	12		0	0	
Pierce	Spring Valley	208	88	4	1		0	0	
Polk	Turtle Lake	312	104	0	6		0	0	
Racine	Raymond	873	119	16	10		0	0	
Racine	Rochester	710	19	16	10		0	0	
Richland	Hillpoint	1080	126	4	17		0	**0	
Sheboygan	Plymouth	305	56	22	17		0	0	
Walworth	East Troy	0	4	0	2		**7	0	
Walworth	Elkhorn	14	1	0	1		0	0	
Waukesha	New Berlin	292	63	19	6		0	0	

<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	2	0	7	0	0	0
Columbia	Arlington	3	0	0	0	2	0	7	0	0	0
Crawford	Prairie du Chien	1	0	1	0	0	0	1	0	2	1
Dane	Mazomanie	2	0	0	0	0	0	0	0	2	0
Fond du Lac	Ripon	7	0	0	0	0	0	1	4	0	0
Manitowoc	Manitowoc	0	0	5	12	0	0	4	0	21	0
Marathon	Wausau	3	3	5	45	0	5	27	0	5	0
Monroe	Sparta	6	0	0	0	0	0	0	36	0	0
Portage	Plover	1	0	0	0	0	0	2	0	3	0
Rock	Janesville	0	0	0	0	0	0	1	0	16	0
Vernon	Coon Valley	2	0	0	0	4	0	5	2	7	0
Walworth	East Troy	3	1	0	0	0	0	1	0	1	0
Wood	Marshfield	6	7	3	20	0	1	16	1	4	3

<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.